
APPENDIX II.

INSTRUCTIONS TO EXPERTS, AND SCHEDULES.

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INSTRUCTIONS.

PURPOSE OF THE INVESTIGATION.

The purpose of the present inquiry is to elucidate, as far as practicable, the character, extent, and total influence of the mining industry. No industry has ever been examined throughout an extensive region so fundamentally and minutely as it is intended that the mineral industry of the West shall have been when this inquiry has been successfully accomplished. The results will be a great addition to the data of political economy, and will form a systematic accumulation of technical facts, such as does not at present exist.

The gathering of these data by the census agents will be a most honorable and a most instructive task; but it is also one requiring the exercise of energy, tact, and judgment. No effort must be spared to obtain full data in all cases. The good will of owners and superintendents is essential to the success of the inquiry, and the purposes of the investigation must be explained where necessary, in order that it may be apparent that it is planned in the interest of mining men throughout the country.

CAUTION.

I cannot impress too strongly or too often upon the agents that communications are to be regarded as inviolably confidential unless permission is given to mention them publicly. After each schedule is filled out, ask what data are to be regarded as confidential, and mark the answers so indicated with a "C". These answers will be used at the office solely for ascertaining averages and totals. Avoid even the appearance of using confidential communications, and remember that you are in honor bound to secrecy.

GENERAL REMARKS ON SCHEDULES.

Schedules and suggestions have been prepared for the agents as far as it is practicable to foresee from the office what will be called for in the field-work, but it is impossible to provide beforehand for the infinite number of combinations which may arise. Accordingly much is necessarily left to the intelligence and judgment of the agent, who, appreciating the spirit of the inquiry, should be able to draw up schedules for the many exceptional cases which will occur in conformity with the tone and scope of those ready prepared for him. Even in replying to the printed questions keen discernment will be called for. Ask yourself, in each case, what reply is *necessary* and *sufficient* to convey an exact comprehension of the fact.

SPECIMENS.

Specimens of ore, country rock, etc., are to be taken as directed in the schedules. The size of these specimens should be, as nearly as possible, 4 by 5 inches by from 1 inch to 1½ inches. Specimens of ore should be selected as characteristic, not as peculiarly rich or pretty. In many cases one specimen of ore and one of the country rock from each wall will suffice, but double the number may be taken when it seems necessary to illustrate the occurrence. Specimens should be well wrapped, and accompanied by an official label giving the precise locality and the position from which they have been taken. The label should be inclosed in the parcel, not pasted upon it.

USE OF THE MAIls.

When the agent has gathered the required information on the technical character of any mine or reduction works, he will immediately sign each schedule and number it with his own current number.

After noting the subjects and numbers of the schedules and specimens, he will mail them under frank to such address as the Director may order.

Specimens are also to be sent by mail. *Packages bearing the departmental frank are not limited to four pounds,* but it is desirable that they should not greatly exceed this weight.

All mail matter should be registered, and stamps will be furnished for the purpose.

PRINTED REPORTS OF COMPANIES, ETC.

At every property the agent will make a request for copies of annual or other reports issued by the company, and also for copies of any reports of experts which may have been printed. When any such are obtained, they will be mailed to the Director of the Geological Survey, or such office as he may direct. The agent will sometimes be referred to the town office of the company for such documents. In such cases he will write immediately to the secretary or other proper officer at the business office, requesting him to forward the desired papers. A note of these applications should be kept, in order that, if necessary, the request may be repeated.

ACCOUNTS.

In keeping his accounts the agent will be governed by the following rules:

1. All accounts accruing during any quarter should, if practicable, be adjusted and paid during the current quarter.
2. Vouchers should bear dates, and all receipts upon vouchers should bear the date at which they were paid.
3. The receipts upon vouchers should express the sums paid in words, written out in full, and by figures, and they should state the name of the bonded disbursing agent.
4. In all accounts for articles purchased, the date of each purchase, the quantity, and rate per unit of each article must be distinctly specified.
5. Subvouchers or bills are necessary, and should be appended to all vouchers when it is practicable to obtain them. When they cannot be obtained, a certificate to that effect should be added to the voucher.
6. All subvouchers must be made out in ink, and no item should appear on a subvoucher for which payment has not actually been made to the person whose name it bears, and when signed by an employé of the census are inadmissible.
7. When money is paid to a person unable to write his name, he must make his mark with his own hand, and the act should be witnessed by some other person than the disbursing officer.
8. Receipts for payments should, when practicable, be signed by a principal, not by an agent. When signed by an agent, he should sign his name in full, and the fact of his agency should be certified to by the person making the payment.
9. Treasury drafts or checks cannot be discounted at the expense of the government.
10. Accounts for services must give the dates, and it must be stated whether they are inclusive or not, and the rate of pay must be given.
11. Actual traveling expenses usual and essential to the ordinary comfort of travelers will be allowed, which will embrace the following items of expenditure only, viz: Cost actually paid for fares upon railroads (other than those bonded, over which transportation requests will be issued by the Superintendent of the Census), stages, steamboats, or other usual modes of conveyance, i. e., street cars or omnibuses, or transfer coaches to and from depots and hotels, and when there are no such conveyances moderate and necessary hack hire, not exceeding legal rates, and baggage fees to porters. In the absence of public conveyances, wagons or saddle-animals may be hired. Sleeping-car fare will be allowed for one double berth for each person, or customary state-room accommodations on boats. When delays at hotels are incident to and necessary for the performance of the duties for which the traveler is ordered, charges for hotel expenses will be allowed not exceeding \$4 per day, the bills for which should always be obtained and filed as subvouchers to the account, which should give the dates of arrival and departure and the rate per day. No charges will be allowed for hotel bills when the detention is unnecessary for the execution of the orders under which the journey is performed. Whenever special expenditures are made for meals, they will be allowed, but for no other items of refreshment than the ordinary food provided for travelers. Journeys will be made upon specific orders. The items authorized must appear in detail upon the voucher or memorandum attached thereto, together with sub-vouchers in all cases in which it is practicable. No other items, of whatever nature, will be allowed. The agent will make out at the end of each week, on official blanks with which he will be supplied, vouchers for his expenses, and a report showing the state of his funds and the work done during the week, and will immediately mail these documents to the officer to whom he is directly responsible. For his own protection the agent should keep duplicate copies.

METHODS OF INVESTIGATION.

Only in the case of mining and metallurgy is it possible to frame schedules of distinct questions, nor even in the case of these technical inquiries is it practicable to cover the whole ground by this method. In regard to the remaining subjects the agent will be guided by the topics presently to be mentioned, and will necessarily exercise his own judgment as to the best method of securing the desired information in particular localities.

When accurate data are unattainable on any topic, estimates must be substituted. Where such a course is unavoidable, great care should be taken to arrive at the best possible estimate under the circumstances, and the note should read: "Estimated at"

For convenience of reference a list of the printed schedules is given on the last page of these instructions.

MINING AND METALLURGY.

In order not to burden the returns with data as to mere prospects, agents will include as mines in the schedules under this chapter only such workings as are now being prosecuted and which have produced 50 tons and upward of remunerative ore, or which show a total length of shafts and galleries of 200 or more feet.

So far as the printed schedules go, the answers can be obtained, in great part, from the superintendent of the mine or mill. In some cases the agent will have to calculate the required answer from such data as he can obtain; in others he will need to make observations, take weighings, etc.

The schedules will often be found insufficient to cover particular cases. For example, in smelting works the treatment of intermediate products, such as dross from refining, matte or regulus, etc., varies with every establishment. Such matters are not to be neglected because they correspond to no printed questions. The agent must frame a schedule corresponding to the conditions and in general harmony with the printed questions, and fill it out in the same manner. Blank pages will be found at the end of the schedules for this purpose.

Some cases are not considered at all in the schedules, because they are rare or because practice is not sufficiently uniform in dealing with them. Suggestions will be made on a few such cases. For the rest the agent must provide by framing schedules for himself.

LIXIVIATION.

Leaching processes being closely allied to amalgamation, the agent will find it possible to use the greater part of the general questions on amalgamating mills in recording the data concerning lixiviation works, sometimes with the change of a word.

The leaching processes commonly consist of three steps: *First*, converting the metal into a soluble compound; *second*, leaching out the metallic compound; *third*, precipitating the metal. The first step is usually accomplished by a roasting process, and the agent is referred to the schedule on roasting furnaces. The methods of effecting solution and precipitation are so numerous that no general schedule can embrace them. The following topics are to be regarded as suggestions, to be supplemented and elaborated as may be required to embody the facts in a concise form:

a. Percentage of the metal rendered soluble.

Apparatus used in solution.

Manner of applying the solvent.

Method of preparing solvent.
 Quantity of solvent and its dilution.
 State whether the extraction is repeated, and how often.
 If two or more solvents are employed, give the data for each.
 Nature of the precipitant.
 Quantity employed.
 Apparatus used in precipitating.
 Method of carrying out the precipitation.
 Quality and character of the precipitate.
 Method of cleansing the precipitate.
 Method of dealing with residual fluid.

HAND WASHING AND "DRY WASHINGS"

Some of the points to be observed are:
 Number of men in the district employed in this business.
 Seasons of the year in which it is carried on.
 Nationality of the washers.
 Average earnings of washers.
 Total amount of bullion recovered for the year from such washings.
 Whether the ground worked is virgin or old.
 Apparatus employed.

BOOMING AND SHOVEL-SLUICING.

These subjects are to be treated on the analogy of hydraulic mining.

RIVER WORKING.

River beds are worked (1) at low water, (2) by turning the channel, (3) by dredging or pumping the sands to the surface from a boat or floating platform, and perhaps in other ways. The agent will readily find in the schedules analogies for guidance in a record of ownership, cost, expenditure of labor, and the like, and in some cases for the treatment of the sands by sluicing, concentration, etc. A brief history of specially important enterprises of this description is desirable.

Besides mines of the metallic ores, the agent will visit all other deposits of useful minerals in his district which are actually being worked, such as quarries, banks, etc., of—

Building-stone.
 Slate.
 Mica.
 Clay (fire clay, brick clay, potters' clay, kaolin).
 Gypsum.
 Phosphates.
 Cement ("Roman," "Portland," etc.).
 Sulphur.
 Cryolite.
 Barytes.
 Strontia.
 Asphalt and bitumen.
 Borax.
 Salt (rock-salt, salt pans, salt springs, salt flats, and the like).
 Other sodium salts (carbonate, sulphate, etc.).

The establishments in which these substances are prepared for market also form a portion of the inquiry, in so far as the processes are essential to give the raw material a salable form. The eliquation or distillation of sulphur, the preparation of cement, and evaporation of saline waters are consequently included. The burning of brick is also to be regarded as essential to the sale of the clay, but the manufacture of pottery is excluded, as is also the manufacture of acid from sulphur, of alum from cryolite, and similar strictly manufacturing operations.

In investigating these deposits of useful minerals the schedule for mines will be used so far as it is directly applicable or can be made to apply by slight changes in phraseology to the case in hand, and all the topics there enumerated (position, ownership, etc.) are to be as minutely inquired into as in the case of metallic mines. Where it fails, the agent will embody the desired information in a concise form and in the general spirit of the detailed schedules.

Especial attention is to be given to the applicability of the raw material to the purposes for which it is employed in the arts. It is plain that the physical properties of building-stone, slate, and mica are of prime importance, whereas the value of sulphur, mineral manures, and sodium salts depends chiefly on their purity. Special processes and machinery too are evidently of great interest, as indicating the modification of mechanical methods induced by variations of material and of geological occurrence, and will receive due attention. Specimens will be collected with judgment and forwarded, like those of ores, duly labeled.

The following suggestions will be of use:

Building-stone and slate—

Geological horizon (give authority).
 Structure of stone (whether massive, thick- or thin-bedded, jointed, etc.).
 Angle of cleavage planes.
 Sizes of blocks obtained.
 Behavior in trimming.
 Relative proportion of cutting stone, bridge stone, rubble, and waste.
 Behavior on exposure (whether it crumbles, rusts, grows harder, etc.).
 Any details as to chemical composition (analyses, if attainable, with name of chemist, whether there is pyrites in the rock, and as nearly as possible how much, and the like).

PRECIOUS METALS.

For what purposes the stone is employed.

The peculiar properties claimed for it.

Whether it takes a polish.

Strength (give details of any experiments that may have been made on its resistance to pressure).

Thickness and smoothness of slate.

Methods of working.

Machinery employed in extracting, hoisting, cutting, and the like.

Mica—

The average and maximum size of sheets, the clearness, and the like, are of importance.

Clay—

Binding properties.

Impurities (as iron, lime, etc.).

Color of burned product.

Ease with which clinker-brick are made.

Resistance to heat (for fire-brick) and tendency to "drop" or fall to pieces when exposed to changes of temperature.

Strength of brick.

Machinery.

Cement—

Binding properties.

Hydraulic properties.

Time of setting.

Hardness when set.

Resistance to chemical action (sewerage, etc.).

Machinery.

Bitumen and asphalt—

Binding properties.

Hardness.

With regard to the other valuable minerals mentioned, the main points to be suggested are the nature and amount of the foreign matters or impurities, their effects on the treatment and use of the raw material, and the apparatus and methods employed in bringing the latter into a salable condition.

CLARENCE KING,
Director United States Geological Survey,
Special Agent Census Office.

LIST OF SCHEDULES.

- A. Metallic mines.
- B. Coal mines.
- C. Petroleum.
- D. Charcoal-burning.
- E. Hydraulic mines.
- F. Hydraulic ditches.
- G. Ore-dressing works.
- H. Amalgamating mills.
- I. Stamp batteries.
- K. Pan amalgamation.
- L. Roasting furnaces in amalgamating works.
- M. Alternate amalgamation and concentration of battery-sands.
- N. Alternate concentration and amalgamation of battery-sands.

- O. Arrastras.
- P. Smelting works in general.
- P 1. Preliminary operations.
- P 2. Smelting in shaft furnaces.
- P 3. Smelting in reverberatory furnaces.
- P 4. Desilverization by zinc.
- P 5. Pattinsonizing.
- P 6. Improving of lead.
- P 7. Cupellation.
- Q. Quicksilver reduction in general.
- Q 1. Reduction in furnaces.
- Q 2. Reduction in retorts.
- Q 3. Quicksilver condensers.

SCHEDULE A.—METALLIC MINES.

(Reported by ————— No. —.)

Name: ————— State or Territory: ————— County: ————— District: —————

POSITION:

- 1. Topographical (considerable detail is required)
- 2. Position relatively to town
- Position relatively to mills or works
- 3. Position relatively to lines of communication
- 4. Altitude referred to sea-level
- Altitude referred to nearest important valley (give name)

OWNERSHIP:

- 5. Name of firm or company
- Main office address
- Capital stock
- Number of shares
- Par value
- Quotation June 1, 1880
- Working capital
- Name of superintendent

- 6. Dimensions and area of mining property
- Nature of title
- Date at which the property came into present ownership
- 7. Particulars of any outside real property of company (as wood-ranches, etc.)

GEOLOGICAL DATA:

- 8. Character of outercrop
- Character of the deposit or ore-bearing formation (whether a vein, im-pregnation, bedded mass, etc.)
- Dip and strike of ore-bearing formation
- 9. Dimensions of deposit so far as known
- Occurrence of ore in the ore-bearing formation (e.g., on the foot wall, in irregular lenticular bodies, etc.)

GEOLOGICAL DATA—continued.

- 10. Ore bodies, their size, distance below the surface, etc.
- What proportion of the ore-bearing formation has been productive?
- 11. Country rock, hanging wall, description (specimens)
- Country rock, foot wall, description (specimens)
- 12. Fossils at or near mines (send specimens, with minute description of position, etc.)
- 13. Character of the country rock, hardness
- Tendency to swell
- Wet or dry (distinguish foot and hanging)
- 14. Faults in the vein (give amount and direction of displacement where possible)
- 15. Mineralogical character of the ore (specimens)
- Physical character of ore
- 16. Nature of the gangue (specimens)
- 17. Quantity of water entering the mine per hour, in gallons (a)
- Depth of the water level
- Is there any notable change in the character of the ore at the water level?
- 18. Temperature at various depths

DEVELOPMENT:

- 19. Is the mine opened by tunnel, shaft, or incline?
- Position of tunnel or shaft relatively to croppings
- Dimensions of tunnels or shafts
- 20. Greatest depth of workings (vertical)
- Greatest horizontal development of workings
- Total length of shafts
- Total length of galleries and tunnels
- Total length of winzes
- Customary grade of galleries

^a One miner's inch may be taken at 700 gallons per hour.

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SCHEDULE A.—METALLIC MINES—Continued.

SYSTEM OF WORKING:

21. Character of prospecting work (whether by galleries or drills).....
- Does prospecting form a regular part of the system of working?.....
- Amount of prospecting and system pursued.....
22. Method of stoping (overhand, underhand, cross-cutting, etc.).....
23. Minimum thickness of veins worked.....
- Character of ground (swelling or not, etc.).....
- Proportion of galleries timbered.....
24. Whether power-drills are used.....
- If so, state number used, their kind, and manufacturer.....
25. Kinds of powder used.....
- Circumstances under which each is used.....
26. Mean volume of one ton of ore in place.....
- Mean volume of one ton of ore broken.....
- Weight and volume of a car-full of coal.....
- Mean volume of a ton of waste in place.....
- Mean volume of a ton of waste broken.....
27. Is underground transportation effected by men, animals, or machinery?.....
- Give details as to number of men or animals, or system of machinery, as far as possible.....
28. Character and amount of dead work done during the year.....
- Amount of waste raised during the year.....
- Number of tons of water raised during the year.....
- Mean depth from which ore has been raised during the year.....
- Mean depth from which waste has been raised during the year.....
- Mean depth from which water has been raised during the year.....

ACCIDENTS:

29. Number of men fatally injured during the year.....
- Number of men disabled above one week.....

30.	Cause of accidents.	Men killed.	Men injured.
Caving, fall of roof, etc.			
Premature explosions of powder.			
Falling of edges.			
Overwinding.			
Falls unconnected with hoisting machinery.			
Other causes.			

PLANT:

31. Hoisting-engines, number in use.....
- Character (vertical or horizontal; whether coupled; with or without fly-wheel).....
- Dimensions of drum.....
- Power of hoisting-engines.....
32. Pumping-engines, number, and number in use.....
- Character and manufacturer.....
- Power of pumping-engines.....
- How much of the time does the pump ordinarily run?.....
- Capacity per hour.....
33. Air-compressors, number, and number in use.....
- Character and manufacturer.....
- Power.....
- Capacity.....
- To what distance is air conveyed?.....
34. Other engines than those for hoisting, pumping, and compressing; their number, purposes, character, and power.....
35. Boilers, number, and number in use.....
- Character and sizes.....
- Style of grate.....
36. Hoisting-cables, wire or hemp.....
- Flat or round.....
- Size of cable.....
- Average load hoisted, including cargo.....
- Average duration of a cable.....
- Total number of tons hoisted on one cable.....
- How often are cables inspected?.....
- Are cables mended?.....
- Height of sheaves above shaft.....
- Diameter of sheaves.....
37. Is hoisting effected on cages, in buckets, or by skips?.....
- Are safeties used to provide against falling?.....
- Are safeties used to provide against overwinding?.....
- If so, state system of safeties.....
- Are pumps used? (if so, state kind).....
- And capacity per hour.....
- If Cornish pumps, state length of rod.....
- And number and weight of counterbalances.....
38. How are signals given (by bell, telegraph, or telephone)?.....
39. To what depth can operations be carried with the present plant?.....
- For what interval of depth was the plant constructed?.....
- Total cost of plant in place (including freight).....

CONSUMPTION OF LABOR, POWER, AND MATERIAL:

40. Table of employés, wages, and shifts:

Employés.	Average number employed.	Length of shift.	Wages per shift.
Mine hands.			
Surface workmen.			
Foremen.			

Number of staff (all employés not engaged in manual labor).....

Aggregate salaries of staff per year.....

41. Is sinking, driving, stoping, or other work done on contract?.....

Explain system in detail.....

Equivalent of contract work in days' labor.....

42. Total number of hours' work done during the year (calculated as if done by one man).....

Total sum paid on labor account (exclusive of staff) during the year.....

How many hours a day is the mine worked?.....

Total number of days on which the mine has been in active operation during the year.....

43. Total horse-power of engines.....

Total quantity of water-fed boilers during the year.....

Pressure of steam.....

Quantity of fuel burned under boilers and its character (if wood, ascertain weight per cord and kind of wood).....

44. If fuel is used for other purposes, state them and the amount used.....

45. Table of supplies consumed, and their cost:

Supplies.	Unit.	Quantity consumed during year.	Price per unit.	Total cost.
Fuel.	{	Cord.....		
		Ton.....		
Timber.		Board foot.....		
Iron.		Pounds.....		
Steel.		Pounds.....		
Candles.		Pounds.....		
Giant powder.		Pounds.....		
Black powder.		Pounds.....		
Other powder.		Pounds.....		

46. Average cost of sinking shafts per foot (with dimensions).....

Average cost of running drifts per foot (with dimensions).....

Cost of mining per ton ore.....

Total cost of operations before the mine became productive.....

PRODUCTION:

47. Table of production.

	Year ending May 31, 1880.	Month of June, 1879.	Month of June, 1880.
Total number of tons produced during the year.....			
Average assay contents in.....			
Average assay contents in.....			
Average assay contents in.....			

Minimum contents of ore extracted.....

Working results of treatment of ore.....

48. Production of former years, if attainable.....

Total production up to June 1, 1870.....

If silver is estimated in dollars, state whether the market value or mint value (1 oz. = \$1.2520) is assumed.....

DISPOSITION OF ORE:

49. Mill or works at which the ore is treated.....

Do those mills or works belong to the mining company?.....

If the ore is sold, state average price per ton.....

Total received for ore during the year.....

50. Method of transporting ore to mill, works, or market.....

Cost of transportation per ton.....

Who pays for transportation?.....

51. Date of the commencement of mining operations.....

Date at which the mine first became productive.....

SCHEDULE B.—COAL MINES.

(Reported by —————— No. ——————)

Name: —————— State or Territory: —————— County: —————— District: ——————

POSITION:

1. Topographical (considerable detail is required).....
- Position relatively to town.....
- Position relatively to mills or works.....
- Position relatively to lines of communication.....
- Altitude referred to sea-level.....

Altitude referred to nearest important valley (give name).....

OWNERSHIP:

6. Name of firm and company.....
- Main office address.....
- Capital stock.....
- Number of shares.....
- Par value.....
- Quotation June 1, 1880.....

OWNERSHIP—continued.

Working capital.....

Name of superintendent.....

6. Dimensions and area of mining property.....

Nature of title.....

Date at which the property came into present ownership.....

7. Particulars of any outside real property of company.....

GEOLOGICAL DATA:

8. Character of out-crop.....
9. Number and thickness of seams.....
10. Overlying rock, description (specimens).....
- Underlying rock, description (specimens).....
11. Fossils in coal or country rock (send specimens, with minute description of position, etc.).....
12. Shape and area of basin.....

PRECIOUS METALS.

SCHEDULE B.—COAL MINES—Continued.

GEOLOGICAL DATA—continued.

13. Faults and folds (give direction of main axis and amount of displacement of faults).....
 14. Character of coal (anthracite, bituminous, or lignite; coking, or non-coking).....
 15. Associated minerals (clay, iron-ore, pyrites, mineral resins, gypsum). A full reply.....
 16. Temperature of the mine at various depths.....
 17. Whether the rock is wet or dry (distinguish roof and floor). Quantity of water entering the mine per hour in gallons.....
 What is the water level?.....
 Is there any notable change at water level?.....

DEVELOPMENT:

18. Is the mine opened by tunnel, shaft, or incline? Position of tunnel or shaft relatively to basin and cropping.....
 Dimensions of tunnels or shafts.....
 19. Greatest depth of workings (vertical). Greatest horizontal development of workings.....
 Total length of shafts.....
 Total length of galleries and tunnels.....
 Total length of winzes.....

SYSTEM OF WORKING:

20. Character of prospecting work (whether by galleries or drills). Does prospecting form a regular part of the system of working? Amount of prospecting and system pursued.....
 21. System of working seams (by pillars and stalls, panel work, etc., described in detail).....
 22. Minimum thickness of seams worked.....
 Proportion of coal left standing.....
 Character of ground (swelling or not, etc.).....
 Proportion of galleries timbered.....
 23. Occurrence of fire-damp.....
 Occurrence of other gases.....
 Use of safety-lamps.....
 24. Whether coal-cutting machines are used. If so, state number used, their kind, and manufacturer.....
 25. Kinds of powder employed.....
 Circumstances under which each is used.....
 26. Mean volume of one ton of coal in place.....
 Mean volume of one ton of coal broken.....
 Weight and volume of a mine car-load of coal.....
 Weight of an empty car.....
 27. Is underground transportation effected by men, animals, or machinery? Give details as to number of men or animals, or system of machinery, as far as possible.....
 28. Character and amount of dead work done during the year. Amount of waste raised during the year.....
 Number of tons of water raised during the year.....
 Mean depth from which coal has been raised during the year.....
 Mean depth from which waste has been raised during the year.....
 Mean depth from which water has been raised during the year.....

ACCIDENTS:

29. Number of men fatally injured during the year.....
 Number of men disabled above one week.....

30.	Cause of accidents.	Men killed.	Men injured.
Caving, fall of roof, etc.....			
Premature explosions of powder.....			
Explosions of gas.....			
Falling of cages.....			
Overwinding.....			
Falls unconnected with hoisting machinery.....			
Other causes.....			

PLANT:

31. Hoisting-engines, number, and number in use. Character (vertical or horizontal; whether coupled; with or without fly-wheel).....
 Dimensions of drum.....
 Power of hoisting-engines.....
 32. Pumping-engines, number, and number in use. Character and manufacturer.....
 Power of pumping-engines.....
 How much of the time does the pump ordinarily run?.....
 Capacity per hour.....
 33. Air-compressors, number, and number in use. Character and manufacturer.....
 Power.....
 Capacity.....
 To what distance is air conveyed?.....
 34. Other engines than those for hoisting, pumping, and compressing; their number, purposes, character, and power.....
 35. Boilers, number, and number in use. Character and sizes.....
 Style of grate.....
 36. Hoisting-cables, wire or hemp. Flat or round.....
 Size of cable.....
 Average load hoisted, including cage or skip.....
 Average duration of a cable.....
 Total number of tons hoisted on one cable.....
 How often are cables inspected?.....
 Are cables mended?.....
 Height of sheaves above shaft.....
 Diameter of sheaves.....
 37. Is hoisting effected on cages, in buckets, or by skips? Are safeties used to provide against falling? Are safeties used to provide against overwinding? If so, state system of safeties

PLANT—continued.

38. Are pumps used? If so, state kind. And capacity per hour. If Cornish pumps, state length of rod. If Cornish pumps, number and weight of counterbalances.....
 39. How are signals given (by bell, telegraph, or telephone)? For what depth can operations be carried with the present plant? Total cost of plant in place (including freight).....
 CONSUMPTION OF LABOR, POWER, AND MATERIAL:

41. Table of employés, wages, and shifts.....

	Average number employed.	Length of shift.	Wages per shift.
Miners.....			
Surface workmen.....			
Foremen.....			

- Number of staff (all employés not engaged in manual labor).....
 Aggregate salaries of staff.....
 42. Is sinking, driving, stoping, or other work done on contract? If so, explain system in detail. Equivalent of contract work for the year in days' labor.....
 43. Total number of hours' work done during the year (calculated as if done by one man). Total sum paid on labor account (exclusive of staff) during the year.....
 44. Total horse-power of engines. Total quantity of water-fed boilers during the year. Pressure of steam.....
 Quantity of fuel burned under boilers, and its character.....
 If fuel is used for other purposes, state them and the amount used.....
 45. Table of supplies consumed, and their cost.....

Supplies.	Unit.	Quantity consumed during year.	Price per unit.	Total cost.
Fuel.....	Tons.			
Timber.....	Board feet.			
Iron.....	Pounds.			
Steel.....	Pounds.			
Candles.....	Pounds.			
Giant powder.....	Pounds.			
Black powder.....	Pounds.			
Other powder.....	Pounds.			

46. Average cost of sinking shafts per foot (with dimensions). Average cost of running drifts per foot (with dimensions). Cost of mining per ton coal. Total cost of operations before the mine became productive.

PRODUCTION:

47. Table of production.....

	Year ending June 1, 1880.	Month of June, 1879.	Month of June, 1880.
Total number of tons produced in.....			

- Proportion of slack produced. Production of former years, if attainable. Total production up to June 1, 1879. 48. Principal purposes for which coal is used. Steam-raising power. Friability and behavior in drying.....

	Sulphur.	Moisture.	Ash.
49. Contents of coal in.....			

- Give more complete analysis if possible. 50. Average market price of coal at mine. Transportation facilities to markets.....

51. Principal markets.	Approximate quantities shipped.	Rate of freight.	Retail price at market.
.....			
.....			
.....			

52. Date of the commencement of mining operations. Date at which the mine first became productive.....

APPENDIX II: SCHEDULES.

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SCHEDULE C.—PETROLEUM.

(Reported by —— No. ——)

<p>Name: —— State or Territory: —— County: —— District: ——</p> <p>POSITION:</p> <ol style="list-style-type: none"> 1. Topographical (considerable detail is required) 2. Position relatively to town 3. Position relatively to works 4. Position relatively to lines of communication 5. Altitude referred to sea-level 6. Altitude referred to nearest important valley (give name) <p>OWNERSHIP:</p> <ol style="list-style-type: none"> 4. Name of firm or company 5. Main office address 6. Capital stock 7. Number of shares 8. Par value 9. Quotation June 1, 1880 10. Working capital 11. Name of superintendent 12. Dimensions and area of oil property 13. Nature of title <p>GEOLOGICAL:</p> <ol style="list-style-type: none"> 6. Describe out-crop of oil-bearing rock, if any 7. If not, state how existence of oil was detected 8. Dip and strike of formation 9. Does it form a basin? If so, describe it, giving dimensions 10. Character of prevailing rocks (with specimens) 11. Fossils, if found here or in vicinity (send specimens and note position) 12. Give position and distance of nearest coal-beds 13. Character and thickness of rocks passed through (with specimens) 14. Observe temperature of well at various depths if possible <p>EXTENT OF DEVELOPMENT:</p> <ol style="list-style-type: none"> 10. Depth of well 11. Is well flowing, or is oil pumped? <p>WORKING SYSTEM:</p> <ol style="list-style-type: none"> 11. Method of boring generally used in district 	<p>WORKING SYSTEM—continued.</p> <ol style="list-style-type: none"> What machine was used for boring? 1. Diameter of hole bored 2. Rate of progress in different rocks passed through 3. Average cost of boring per running foot <p>ACCIDENTS:</p> <ol style="list-style-type: none"> 12. Character and number of accidents during year <p>PLANT:</p> <ol style="list-style-type: none"> 13. Character and number of engines employed 14. Horse-power (total) 15. Describe rest of plant 16. Total cost of plant (including freight) <p>CONSUMPTION OF LABOR, POWER, AND MATERIAL:</p> <ol style="list-style-type: none"> 14. Average number of men employed, and capacities 15. Wages paid each 16. Total wages paid during year 17. Total horse-power of engines 18. Pressure of steam 19. Total quantity of water fed to boilers during year 20. Kind and quantity of fuel burned <p>PRODUCTION:</p> <ol style="list-style-type: none"> 16. Total number of gallons oil produced during year ending June 1, 1880 17. Total number of gallons oil produced during month of June, 1879 18. Total number of gallons oil produced during month of June, 1880 19. Production of former years, if obtainable 20. Character of oil produced and purposes for which used 21. Density of crude oil 22. Basis after distillation (tar or paraffine) <p>DISPOSITION:</p> <ol style="list-style-type: none"> 18. Value at well per gallon 19. Transportation facilities 20. Principal markets 21. Cost of freight thither per barrel and per gallon 22. Retail price there per gallon
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SCHEDULE D.—CHARCOAL BURNING.

(Reported by —— No. ——)

<p>Name: —— State or Territory: —— County: —— District: ——</p> <p>POSITION:</p> <ol style="list-style-type: none"> 1. Topographical position (considerable detail is required) 2. Position relatively to town 3. Position relatively to works or market 4. Position relatively to lines of communication <p>OWNERSHIP:</p> <ol style="list-style-type: none"> 4. Name of owner 5. Working capital 6. Nature and area of wood claims 7. What proportion of available timber has been exhausted? 8. Date at which operations were begun 9. Date at which property came into present ownership 10. How long will supply of timber probably last at present rate of consumption? <p>WOOD:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">6. Name and locality of ranch supplying wood.</th><th style="width: 10%;">Weight of wood per cord.</th><th style="width: 40%;">Botanical character.</th></tr> </thead> <tbody> <tr> <td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>.....</td><td>.....</td><td>.....</td></tr> </tbody> </table> <p>(Send section of bough and twig of foliage.)</p> <ol style="list-style-type: none"> 7. Mean distance from which wood is transported 8. How is wood transported (by flume, wagon, or pack-animals)? 9. Cost of transportation 10. At what season is the wood cut? 11. Is the wood in the sap when cut? 12. Average length and thickness of billets of wood burning <p>PROCESS:</p> <ol style="list-style-type: none"> 8. Is the wood charred in pits, stacks, or kilns? 9. How many of each in use? 10. Give reasons for preferring this system 11. Amount of wood charged in one apparatus, in cords 12. System of ignition 13. How is the combustion controlled? 14. Duration of burning 15. Duration of cooling 16. Are any distillation products preserved, and what? 17. Average number of bushels of charcoal produced per cord of wood 18. Weight of a bushel of charcoal 19. Maximum capacity of works 	6. Name and locality of ranch supplying wood.	Weight of wood per cord.	Botanical character.	<p>CONSUMPTION OF LABOR:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">11. Class of laborers.</th><th style="width: 10%;">Number of each employed.</th><th style="width: 10%;">Wages of each per shift.</th><th style="width: 10%;">Length of shift.</th><th style="width: 10%;">Nationality.</th></tr> </thead> <tbody> <tr> <td>.....</td><td>.....</td><td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>.....</td><td>.....</td><td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>.....</td><td>.....</td><td>.....</td><td>.....</td><td>.....</td></tr> </tbody> </table> <p>Total number of hours' labor performed during the year, calculated as if it had been done by one man</p> <p>COST:</p> <ol style="list-style-type: none"> 12. Total cost of plant 13. Cost of charring per bushel of charcoal 14. What portion of the wood is purchased? 15. At what price is it purchased? 16. What does wood felled by the owners cost, delivered, per cord? <p>PRODUCTION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">13. Amount of</th><th style="width: 10%;">During year ending May 31, 1880.</th><th style="width: 10%;">During month of June, 1879.</th><th style="width: 10%;">During month of June, 1880.</th></tr> </thead> <tbody> <tr> <td>Wood consumed, in cords</td><td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>Charcoal produced, in bushels</td><td>.....</td><td>.....</td><td>.....</td></tr> <tr> <td>Charcoal produced, in pounds</td><td>.....</td><td>.....</td><td>.....</td></tr> </tbody> </table> <p>DISPOSITION OF PRODUCT:</p> <ol style="list-style-type: none"> 14. To what market is the charcoal shipped? 15. Cost of getting it to market 16. Is it sent in bulk or sacks? 17. How is it transported? 18. Average price at market <p>DESCRIPTION OF APPARATUS:</p> <ol style="list-style-type: none"> 15. Give shape and dimensions of kilns, stacks, or pits, with diagram 16. If kilns, give— 17. Material of which constructed 18. Source from which material is obtained 19. Average duration 20. Cost of building 21. If stack or pit, give— 22. Time required for construction 23. Cost of construction 24. Material used for covering 25. Any other interesting details of apparatus 	11. Class of laborers.	Number of each employed.	Wages of each per shift.	Length of shift.	Nationality.	13. Amount of	During year ending May 31, 1880.	During month of June, 1879.	During month of June, 1880.	Wood consumed, in cords	Charcoal produced, in bushels	Charcoal produced, in pounds
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SCHEDULE E.—HYDRAULIC MINES.

(Reported by —— No. ——)

<p>Name: —— State or Territory: —— County: —— District: ——</p> <p>POSITION:</p> <ol style="list-style-type: none"> 1. Topographical (considerable detail is required) 2. Position relatively to town 3. Position relatively to sources of supply of water 4. To lines of communication 5. Altitude referred to sea-level 6. Altitude referred to nearest valley available for tailings (give name) <p>OWNERSHIP:</p> <ol style="list-style-type: none"> 5. Name of firm or company 6. Main office address 7. Capital stock 	<p>OWNERSHIP—continued.</p> <ol style="list-style-type: none"> Number of shares Par value Quotation June 1, 1880 Working capital Name of superintendent Dimensions and area of mining property Nature of title Date at which property came into present ownership Particulars of any outside real property of company (as land for tailings, etc. If the company also owns ditches, mention here, but describe on appropriate schedule)
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SCHEDULE E.—HYDRAULIC MINES—Continued.

GEOLOGICAL DATA:

8. Superficial extent of the gravel deposit.....
 Form of the surface.....
 Form of the bed-rock (is it a river-bed or basin?).....
 Width and length of river-bed or basin.....
 9. Maximum depth of gravel.....
 Mean depth of gravel on claim.....
 Do false bed-rocks occur in the deposit?.....
 10. Kind and order of deposits recognized in gravel.....
 11. What is the richest portion of the gravel?.....
 Is any portion barren?.....
 Is grass-root gold found?.....
 What proportion of the gravel pays?.....
 12. Surface of bed-rock (whether rough or not, etc.).....
 Character of bed-rock (description and specimen).....
 13. Are any fossils found in bed-rock or gravel (specimens, with minute description of occurrence)?.....
 14. Is any portion of the gravel overlaid by lava (specimen)?.....
 15. Occurrence of water and quick-sand.....
 What is the water-level?.....
 Is there any notable change in the deposit at the water-level?.....

DEVELOPMENT:

16. Is the claim opened by a tunnel or a cut?.....
 How long is it?.....
 What are its dimensions?.....
 What is its grade?.....
 Depth of chimneys from end of tunnel.....
 Position of chimneys relatively to river-bed or basin.....
 17. Area of gravel cleared away up to June 1, 1880.....

PIPING APPARATUS:

18. What is the difference of level between pressure boxes and nozzles?.....
 Diameter of pipes and number.....
 Material of which pipes are constructed.....
 Method of joining lengths of pipe.....
 Thickness of walls of pipe.....
 Number of nozzles fed by one pipe.....
 19. Total number of nozzles.....
 Name of nozzle, and size.....
 Maker of nozzle.....
 Method of deflecting nozzle.....
 Quantity of water thrown from nozzle (in gallons).....
 20. What definition of a "miner's inch" is accepted at this mine?.....
 Mean length of stream thrown from nozzle.....

WATER SUPPLY:

21. From what locality does the water supply come (lake or river, etc.)?.....
 Who owns the water?.....
 If the water has been used before, state particulars.....

WORKING:

22. In how many benches is the mine worked?.....
 What are the heights of the benches?.....
 How much gravel is extracted by drifting?.....
 What tenor of gravel pays for drifting?.....
 23. Are power-drills in use? If so, state purposes, number, description of drill, etc.....
 24. Kinds of powder used.....
 State circumstances under which each is employed.....
 What quantities of powder are used per blast?.....
 25. System of disposing the powder.....
 Is the blast tampered?.....
 How is the blast fired?.....
 If by electricity, state name and size of machine.....
 How much ground is loosened on the average per cwt. of powder?.....
 26. Are hurdy-gurdy wheels in use?.....
 For what purposes, and how many?.....
 Dimensions of wheels.....
 How much water do the wheels consume?.....
 What power do they develop?.....
 27. Mean weight of a cubic yard of gravel.....

SLUICES:

28. Grade of sluices from bank to chimney.....
 Length of sluices from bank to chimney.....
 Is the chimney perpendicular, inclined, or in steps?.....
 Description of pavement at bottom of chimney.....

SLUICES—continued.

29. Width of sluice-boxes in tunnel.....
 Grade of sluice-boxes in tunnel.....
 Length of sluice-boxes in tunnel.....
 Style of riffles in sluice-boxes in tunnel.....
 30. Sluice-boxes outside of tunnel, width.....
 Sluice-boxes outside of tunnel, grade.....
 Style of riffles in these sluices (state length for each style).....
 31. Number of under-currents.....
 Number of drops, and their height.....
 Number of grizzlies, and their height.....

AMALGAMATION:

32. How much quicksilver is added to the sluices, and where?.....
 At what times is it added?.....
 33. How is the gold found to be distributed in the sluices and under-currents?.....
 How often are the various parts of the sluices cleaned up?.....
 34. Describe the retorting of amalgam.....

ACCIDENTS:

35. Number of men fatally injured during the year.....
 Number of men disabled above one week.....

Cause of accident.	Men killed.	Men injured.
Caving of bank.....
Premature explosions of powder.....

CONSUMPTION OF LABOR, POWER, AND MATERIAL:

36. What is the consumption of water per hour?.....
 What is the consumption of water per day?.....
 What is the consumption of water per year?.....
 Under what head or pressure is the water used?.....
 37. Number of men of different classes employed, and their wages.....
 Length of shift.....
 38. Number of hours' work done during the year, calculated as if done by one man.....
 Number of working hours per day.....
 Total amount paid on labor account.....
 39. How much quicksilver is lost?.....
 How much gold is supposed to be lost?.....
 40. How long do riffles of various kinds last?.....
 41. Total cost of plant.....
 What is the total cost of hydraulic mining per ton of ore?.....
 Total cost of operations before the mine became productive.....

PRODUCTION:

42. On how many days during the year has the mine been worked?.....
 State usual limits of the season and the cause (ice or drought).....

43.	Year ending June 1, 1880.	Month of June, 1879.	Month of June, 1880.
Quantity of gravel worked.....			
Quantity of gold obtained.....			
What is the fineness of the gold?.....			
What other metal does the bullion contain?.....			
Is any platinum found?.....			
Are any diamonds found?.....			
44. Production of former years, if attainable.....			
Total production up to June 1, 1880.....			

DISPOSITION OF BULLION:

45. To what market is the bullion shipped?.....
 Through what transportation company?.....
 What charges are incurred in getting it to market?.....
 What discount is charged on the bullion?.....

SCHEDULE F.—HYDRAULIC DITCHES.

(Reported by ———. No. —.)

Name: ———. State or Territory: ———. County: ———. District: ———.
POSITION:

1. State sources of supply of water and their position.....
 Does the water come from perennial springs or from melted snows?.....
 Describe the country through which the ditches pass.....
 2. Give the localities to which water is supplied and their relation to the ditches.....

OWNERSHIP:

3. Name of firm or company.....
 Main office address.....
 Capital stock.....
 Number of shares.....
 Par value.....
 Quotation June 1, 1880.....
 Working capital.....
 Name of superintendent.....
 Date at which the ditch was constructed.....
 Date at which the ditch came into its present ownership.....

PLANT:

4. Reservoirs, their position and capacity.....
 General description of construction.....
 Total length of ditches (including flumes, pipes, etc.).....
 5. Length of flumes.....
 Depth of canons crossed.....
 Length of pipes.....
 Depth of canons crossed.....
 6. Grade of ditches.....
 Cross-section of ditches.....

PLANT—continued.

- Mean velocity of water in ditches at any section.....
 Are the ditches lined to any extent?.....
 If so, with what material?.....
 7. Grade of flumes.....
 Cross-section of flumes.....
 Velocity of water in flumes.....
 8. Diameter of pipes.....
 Thickness of iron at various depths.....
 How are longitudinal joints made?.....
 How are circular joints made?.....
 Are air-valves employed; and if so, at what points?.....

CAPACITY:

9. What is the total quantity of water delivered by the ditches?.....
 What quantity of water is supposed to be lost by leakage?.....
 What quantity of water is supposed to be lost by evaporation?.....
 During what months is water supplied?.....
 At what rates is water supplied?.....

COST:

10. What is the average cost of ditches per yard?.....
 What is the average cost of flumes per yard?.....
 What is the average cost of pipes per yard?.....
 Cost of the reservoirs.....
 Total cost of the whole plant.....
 11. What repairs are made, and what do they cost?.....
 12. State the different classes of employees, their number and wages.....
 13. Give an account of the accidents which have occurred during the year, their character and effects.....

PRECIOUS METALS.

SCHEDULE H.—AMALGAMATING MILLS—Continued.

CONSUMPTION OF LABOR, POWER, AND MATERIAL—continued.
Quantity of fuel consumed in roasting during the year.....
If fuel is used for any other purposes state them, and the amount used.....

11. Table of supplies consumed, and their cost

	Unit.	Total consumption for the year.	Price per unit.	Total cost.
Fuel.....	Cord or ton.....			
Quicksilver.....	Pounds.....			
Salt.....	Pounds.....			
Bluestone.....	Pounds.....			
Cast iron.....	Pounds.....			
Steel.....	Pounds.....			
Lubricators.....	Gallons.....			

LOSSES OF METALS:

12. Percentage of assay value of gold extracted by first treatment.....
Percentage of assay value of silver extracted by first treatment.....
Mean assay value of tailings in gold and silver.....
Mean assay value of slimes in gold and silver.....

COST OF MILLING:

13. Cost of mill (including freight).....
Cost of milling per ton ore.....

TERMS FOR CUSTOM MILLING:

14. Price charged for milling per ton ore.....
Agreement, if any, as to per cent. of bullion returned to mine owners.....
Do slimes, tailings, and agitator sands belong to the mill?

15. Terms on which ore is purchased, if any. (If a sliding-scale is in use, give it in full).
Who pays for the transportation of the ore to the mill? If the mill pays, at what rates?.....
Means of transportation

PRODUCTION:

16. Table of production during the year ending June 1, 1880.....

	Tons worked.	Mean assay value.		Bullion produced.	
		Fine gold.	Finesilver.	Fine gold.	Finesilver.
Ore.....					
Tailings.....					
Slimes.....					

(If the bullion product cannot be immediately given in fine metal the agent must calculate it from the other data)
Fineness of bullion in gold and in silver.....
What metal or metals constitute the residue?

17.

June, 1870. June, 1880.

Ore slimes and tailings treated.....
Fine gold extracted.....
Fine silver extracted.....

18. Production for former years, if attainable.....

Total production up to June 1, 1879.....
If silver is estimated in dollars, state whether the market value or mint value (1 oz. == \$1.2929) is assumed.....

DISPOSITION OF BULLION:

19. To what market is it shipped?

Through what transportation company.....
Charges incurred in getting bullion to market.....
Discount on bullion

SCHEDULE I.—STAMP-BATTERIES.

(Reported by — — — No. — —)

Name: — — — State or Territory: — — — County: — — — District: — — —

CONSTRUCTION:

1. Crushing, wet or dry.....
Where was the battery manufactured, and by whom?

Number of stamps.....
Number of stamps per battery.....

2. Weight of stamps, new.....
Weight of shoe, new.....
Weight of die, new.....
Are the guides of wood, iron, or brass?

Are the shoes and dies of iron or steel?

Precise character of metal (e. g., nearly white mottled iron, Franklinite, etc.)

Number of cams per stamp.....
Maximum drop attainable.....

3. Width of mortar at the bottom of screen.....
Level of new die surface, measured from lower edge of discharge.....
Discharge, single or double.....
Kind of screen used (e. g., needle-junched, brass wire, etc.; make special mention of concave screens, if used)

Number of screens (e. g., No. 4 or No. 60)

Is the battery provided with a copper plate for amalgamation?

4. If a separate engine is used in running the battery, state its power.....
How many stamps are run by a single counter-shaft and pulley?

Is the battery fed by hand or machines?

If by machines, state name, manufacturer, and number

How many rock-breakers are used?

State name, manufacturer, and number

5. If the crushing is dry, state manner in which the ore is dried.....
If the mortar is built of plates, mention the fact, the general method of construction, and its success.....

ADJUSTMENT:

6. Mean fall of stamps:

Number of blows per minute.....
Order in which the stamps in each battery fall.....
Average rotation of stamps in rising.....
Average rotation of stamps in falling

DUTY OF BATTERY:
7. Mineralogical character of ore

Physical character (state hardness, toughness, etc., as exactly as possible)

DUTY OF BATTERY—continued.

8. Average number of tons ore crushed per day per stamp.....
Maximum amount of ore crushed per day per stamp.....
What weight of stamp and what drop gives the best result with these ore?

9. If battery amalgamation is practiced, state amount of gold caught.....
If battery amalgamation is practiced, state amount of silver caught.....
Proportion of each to contents of ore.....
How much gold and silver does battery amalgam contain per ounce?

WEAR AND CONSUMPTION:

10. How long do average cams last?

How long do average shoes last?

How long do average dies last?

How long do average screens last?

How long do average stems last?

What is the average weight of old shoes?

What is the average weight of old dies?

What is the usual fracture of cams?

11. Get or calculate the loss of weight of shoes and dies per ton ore crushed.....
If battery amalgamation is practiced, state quantity of quicksilver added in the battery.....
If the battery crushes wet, state quantity of water per ton crushed (a)

12. What is the shape of the surfaces of old shoes and dies?

Give depth of the depression or height of elevation of the center of each from the edge

METHOD OF HANDLING DRY-CRUSHED ORE:

13. State method of removing fine ore from front of screens

METHOD OF HANDLING PULP IN WET CRUSHING:

14. If crushing is wet, state minimum grade of sluices to settling tanks, and distances.....
Total area of settling tanks

Number of compartments

Area and depth of each

15. Number of compartments through which the pulp flows at any one time.....
One stream passing through the settling tanks carries the pulp from how many stamps?

How deep is the pulp in a tank compartment when it is regarded as full?

How many tons of dry pulp does this represent?

16. What percentage of ore passes from the mill as slimes?

Area and depth of slime ponds

a One miner's inch may be taken as 700 gallons per hour.

SCHEDULE K.—PAN AMALGAMATION.

(Reported by — — — No. — —)

Name: — — — State or Territory: — — — County: — — — District: — — —

EXTENT OF PLANT:

1. Number of pans for working ore

Number of settlers

Number of agitators

Number of clean-up pans

Number of tailings pans (for working concentrations from ore already once worked)

Number of hydraulic strainers

Number of quicksilver pumps

Number of retorts

Number of melting furnaces

PANS FOR WORKING ORE:

2. Dimensions of ore pans.....
System of ore pans

Name of maker, and place of manufacture

Number of shobs, and weight of set, new

Number of dies, and weight of set, new

What provisions are made for heating pans?

3. Customary number of revolutions per minute.....
Weight of charge, dry

Temperature ordinarily maintained

Is heating effected by live steam or exhaust steam?

How long does it take to work a charge?

APPENDIX II: SCHEDULES.

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SCHEDULE K.—PAN AMALGAMATION—Continued.

PANS FOR WORKING ORE—continued.

- Is the muller kept down all the time?.....
- If not, how long after the beginning of the charge is it raised?.....
- How much quicksilver is charged to the pan?.....
- Is a certain amount of quicksilver charged per ounce of bullion in the ore?.....
- If not, what rule is adopted?.....
- At what period in the quicksilver added?.....
- What other chemicals are added to each charge?.....
- In what quantities?.....
- At what period?.....
- What rule is adopted in adding chemicals?.....
- Is iron added in shavings and the like?.....
- If salt is used, state source of supply?.....
- How much quicksilver is lost per ton of ore treated?.....
- What is the average weight of a set of worn-out slices?.....
- What is the average weight of a set of worn-out dies?.....
- Calculate consumption of iron of shovels and dies per ton of ore?.....
- Calculate consumption of iron of shovels, etc., if used, per ton of ore?.....
- Has explosive gas ever been noticed in the pans? If so, state details?.....
- Has the machinery ever been electrically charged? If so, state particulars in detail?.....
- How often are the pans cleaned up?.....
- Is there a general clean up of the mill?.....

SETTLERS:

- Dimensions of settlers.....
- Customary number of revolutions per minute?.....
- How long is a charge kept in the settler?.....
- How long after opening the highest plug is the settler completely emptied?.....

AMALGAM AND QUICKSILVER:

- is the quicksilver which passes through the strainers carried back to the pans in buckets, or pumped?.....
- Of what material are the straining bags?.....
- Is the amalgam from the straining bags put through a clean-up pan?.....
- If so, state dimensions and capacity?.....
- If an hydraulic strainer is used, state pressure?.....
- If hot straining is employed, state system, temperature, and results?.....
- What is the gold and silver contents of an ounce of amalgam as it goes to the retorts?.....
- Dimensions of retorts?.....
- Is the vent at the center of the rear end or at the upper edge?.....
- If the former, is it the practice to turn the retorts after one side is worn?.....
- Is the section of the retort circular, and if not, of what shape?.....
- What weight of amalgam is charged in a retort?.....
- How deep is the retort filled?.....
- Is the amalgam charged in cups?.....
- Or divided by disks of sheet-iron?.....
- How long does it take to retort a charge?.....
- How much fuel is burned?.....
- Describe as nearly as possible the temperature?.....
- How much quicksilver is lost in distillation?.....
- State whether the vent often chokes?.....
- If so, to what cause is it ascribed?.....
- How many charges does the average retort stand?.....

a The amalgamation of slimes is sometimes performed in pans of peculiar construction, for instance, with several mullers. In such cases the agent will frame a schedule applicable to the case, and based on the scheme for ordinary pans.

SCHEDULE L.—ROASTING FURNACES (IN AMALGAMATING MILLS).

(Reported by _____ No. ____.)

Name: _____. State or Territory: _____. County: _____. District: _____.
FURNACES:

- Number of furnaces.....
- Number in use.....
- Name by which the furnace is known.....
- General system of furnace (as revolving cylinder, shaft-furnace, etc.).....
- Principal dimensions, with diagrams.....
- Kind of lining and source from which it is obtained.....
- Any important details of construction.....
- Does the ore pass through the furnace continuously, or is one charge finished before a second is begun?.....
- How often is the furnace shut down for repairs?.....
- What is the capacity of the furnace per twenty-four hours?.....
- Method of conveying the ore to the furnace.....
- Method of feeding the ore into the furnace.....
- If any mechanism is used in feeding salt describe it.....

PROCESS:

- Principal manipulations in roasting.....
- Describe, by colors, the temperatures used in roasting.....
- Average tenor of the ore which is roasted, and any known details of composition.....
- Rule for mixing ores of different grades and qualities.....
- If the ore is roasted charge by charge, what does the charge weigh?.....
- How long is a charge roasted?.....
- What is the interval of time between the charging of two successive charges?.....

PROCESS—continued.

9. If the ore is roasted continuously, how long is any particle of ore exposed to the roasting action?.....

10. Is salt used in roasting?.....

11. If so, what quantity per ton, on the average?.....

Is the salt added with the raw ore, or where it is partially roasted, and if the latter, at what period?.....

What governs the amount of salt added?.....

What is the average sulphur content of the ore roasted?.....

How close is it necessary to keep to this sulphur content?.....

What is the average per cent. of metal chloridized?.....

LABOR, FUEL, AND POWER:

12. Number of men employed, and length of shifts.....

What fuel is used?.....

How much per ton of raw ore?.....

If the furnace is a mechanical one, what is the power used to drive it?.....

RESULTS:

13. Loss of weight of ore in roasting.....

Tenor of roasted ore, and any known details of composition.....

FLUE-DUST:

14. Number of flue-dust chambers.....

Describe their general construction and dimensions, with diagram.....

15. Amount of flue-dust caught per ton of ore roasted.....

Supposed loss of flue-dust.....

Tenor of flue-dust.....

Differences in composition between flue-dust and roasted ore.....

SCHEDULE M.—ALTERNATE AMALGAMATION AND CONCENTRATION OF BATTERY-SANDS (BEGINNING WITH AMALGAMATION).

(Reported by _____ No. ____.)

Name: _____. State or Territory: _____. County: _____. District: _____.
AMALGAMATION OF PULP ON SLUICES:

- Number of amalgamated battery sluices.....
- Slope of amalgamated battery sluices.....
- Width of amalgamated battery sluices.....
- Length of a sluice.....
- Quantity of bullion recovered from these sluices.....
- And its proportion to the metal contained in the ore.....

AMALGAMATION OF PULP ON SLUICES—continued.

2. If any other apparatus is employed in front of the battery, instead of amalgamated sluices, state particulars.....

CONCENTRATION OF TAILINGS FROM AMALGAMATED SLUICES:

3. State kind of concentrator.....

Number of apparatuses.....

Most important dimensions.....

Quantity of pulp concentrated by one concentrator in twenty-four hours.....

SCHEDULE M.—ALTERNATE AMALGAMATION AND CONCENTRATION OF BATTERY-SANDS, ETC.—Continued.

CONCENTRATION OF TAILINGS FROM AMALGAMATED SLUICES —continued.	TAILINGS FROM CONCENTRATORS —continued.
If the sands, or a portion of them, are concentrated a second time, state the particulars.	What disposition is made of them?
4. What quantity of concentrations is obtained per day and per ton ore crushed?	If sold, state price.....
How are the concentrations treated (if by pan amalgamation use pan schedule)?	If chloridized for mill company, state rate
What do the concentrations assay?	And per cent. of bullion returned
TAILINGS FROM CONCENTRATORS:	TAILINGS FROM PANS:
5. How are the tailings from concentrators treated?	7. Quantity of pan residues obtained.
If further concentratated, state number and dimensions of apparatus.	Assay value.....
6. Quantity of concentrated tailings caught.	Disposition.....
Assay value of concentrated tailings caught.	If sold, state price
	If chloridized for mill company, state rate
	And per cent. of bullion returned

SCHEDULE N.—ALTERNATE CONCENTRATION AND AMALGAMATION OF BATTERY-SANDS (BEGINNING WITH CONCENTRATION).

(Reported by _____ No. ____.)

Name: _____	State or Territory: _____	County: _____	District: _____
CONCENTRATION OF PULP ON BLANKETS:			
1. Number of blanket-slueses.....	TAILINGS FROM BATTERY BLANKET-SLUICES:		
Slope of blanket-slueses.....	7. What means are taken to extract the metal from blanket-sluee tailings?		
Width of blanket-slueses.....	If similar apparatus to that in use for amalgamator tailings is employed to some extent.....		
Length of a sluice.....	Quantity of material caught.....		
Number of blankets in a sluice.....	Value of this material by assay.....		
2. Frequency with which blankets are washed (discriminate blankets nearest battery, next lower, and so on).....	8. If some different apparatus is used, state construction, dimensions, and results.....		
Quantity of blanket concentrations obtained per ton ore crushed.....	TREATMENT OF MATERIAL COLLECTED FROM SLUICES, etc.:		
Assay value of blanket concentrations.....	9. State total quantity of material collected from sluices, etc.		
AMALGAMATION OF BLANKET CONCENTRATIONS:			
3. Short description of amalgamator.....	State assay value of material collected from sluices, etc.		
Quantity of bullion recovered.....	How it is treated?.....		
Temperature of water.....	If in pans, continue description on pan schedule.....		
Quantity of water.....	TREATMENT OF TAILINGS ESCAPING FROM MILL SLUICES:		
TAILINGS FROM AMALGAMATOR:			
4. If treated on amalgamated surfaces, state their nature.....	10. State general method of concentrating mill tailings.....		
Is the copper of such surfaces silver-plated before amalgamation?.....	Number and principal dimensions of apparatus.....		
State length of surfaces.....	Quantity of concentrated tailings obtained.....		
State breadth of surfaces.....	Assay value of concentrated tailings obtained.....		
State slope of surfaces.....	11. Disposition made of concentrations.....		
Depth of water on plates.....	If sold, state price.....		
5. If any mechanism is employed as a substitute for a portion of the amalgamated sluices, state its nature and general dimensions.....	If worked for mill company in chloridizing works, state price per ton paid for treatment.....		
6. How long do plates last without recalibration?.....	And per cent. of assay value returned by chloridization works.....		
If the copper plates are silver-plated, what does it cost per square foot?.....	PAN TAILINGS:		
How long does the plating last?.....	12. Quantity of residues from pans obtained.....		
What quantity of material is caught on the foregoing sluices and substitutes?.....	Assay value.....		
What is its value by assay?.....	Disposition.....		
	If sold, state price.....		
	If chloridized for mill company, at what price?.....		
	And per cent. of bullion returned.....		

SCHEDULE O.—ARRASTRAS.

(Reported by _____ No. ____.)

Name: ____ State or Territory: ____ County: ____ District: ____
POSITION:
 1. Topographical (considerable detail is required) ____
 2. Position relatively to town ____
 Position relatively to mines ____
 3. Position relatively to lines of communication ____
OWNERSHIP:
 4. Name of firm or owner ____
 Address ____
 Working capital ____
 Name of superintendent ____
 Date at which arrastras were built ____
 Date at which they came into present ownership ____
Ore TREATED:
 5. Ore treated during the year ending June 1, 1880 ____
PLANT—continued.
 8. Customary number of revolutions per minute ____
 Weight of charge, dry ____
 How long does it take to work a charge? ____
 How much quicksilver is added per charge? ____
 9. What rule is adopted to determine the quantity of quicksilver added, or what test is applied? ____
 When is the quicksilver added? ____
 10. What other chemicals are used? ____
 In what quantities? ____
 At what time are they added? ____
 11. How are the arrastras discharged? ____
 How often are the arrastras cleaned up? ____
 12. Describe the straining of amalgams. ____
 What is the gold and silver content of the amalgam as it goes to the refinery? ____

PLANT—continued.

8. Customary number of revolutions per minute
- Weight of charge, dry
- How long does it take to work a charge?
- How much quicksilver is added per charge?
9. What rule is adopted to determine the quantity of quicksilver added, or what test is applied?
- When is the quicksilver added?
10. What other chemicals are used?
- In what quantities?
- At what time are they added?
11. How are the arrastras discharged?
- How often are the arrastras cleaned up?
12. Describe the straining of amalgam
- What is the gold and silver contents of the amalgam as it goes to the retorts?
- Describe the retorting
13. What disposition is made of tailings?
- What is the supposed or known contents of tailings?
14. Describe the sampling done
- How are assays made?

CONSUMPTION OF LABOR, HOUSEHOLD AND MATERIALS.

CONSUMPTION OF LABOR, POWER, AND MATERIAL:
15. Table of employés' wages and shifts.

Project Wages and Shareholders' Returns

Classes of employees.			
Average number employed .....	.....	.....	.....
Length of shift .....	.....	.....	.....
Wages per shift .....	.....	.....	.....

Total number of hours work done during the year, calculated as if done by one man
Total sum paid on labor account during the year
16. During how many days of the year has the mill been in active operation?
How many hours a day is the mill in operation?
17. What is the motive power? (If animals, state number; if engine, state power)

APPENDIX II: SCHEDULES.

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SCHEDULE O.—ARRASTRAS—Continued.

CONSUMPTION OF LABOR, POWER, AND MATERIAL—continued.
18. Table of supplies consumed, and their cost.....

	Unit.	Total consumption for the year.	Price per unit.	Total cost.
Fuel.....	Cord or ton.....			
Quicksilver.....	Pounds.....			
Salt.....	Pounds.....			
Bluestone.....	Pounds.....			
Lubricators.....	Gallons.....			

LOSSES OF METALS:
19. Percentage of assay value of gold extracted by first treatment.....
Percentage of assay value of silver extracted by first treatment.....
Assay value of tailings.....

COST OF MILLING:
20. Cost of plant.....
Cost of treatment per ton of ore.....

TERMS:

21. Terms on which ore is purchased.....
Terms on which ore is worked for owners.....

PRODUCTION:

22.	Year ending May 31, 1880.	Month of June, 1879.	Month of June, 1880.
Fine gold produced.....			
Fine silver produced.....			

Average fineness of bullion in gold and silver.....
Production of former years, if attainable.....

DISPOSITION OF BULLION:
23. To what market is the bullion shipped?.....
Through what transportation company?.....
Charges incurred in getting bullion to market.....
Discount on bullion.....

SCHEDULE P.—SMELTING WORKS.

(Reported by — — — No. —.)

Name: —. State or Territory: —. County: —. District: —.

POSITION:

1. Topographical (considerable detail is required).....
2. Position relatively to town.....
3. Position relatively to mines.....

OWNERSHIP:

4. Name of firm or company.....
Main office address.....
Capital stock.....
Number of shares.....
Par value.....
Quotation June 1, 1880.....
Name of superintendent.....
5. Date at which works were built.....
Date at which works came into present ownership.....
Amount of real estate owned.....

ORE TREATED:

6. Name and locality of mine supplying ore.	Quantity of ore from each mine for year.	Assay value of ore.			Character of ore.	
		In—	In—	In—	Physical.	Mineralogical.
.....
.....
.....
.....
.....
.....

COMPOSITION OF ORE:

7. Designation of ore.	Contents in—						
	Arsenic.	Antimony.	Sulphur.	Zinc.	Iron.	Limo.	Silica.
.....
.....
.....
.....
.....
.....

8. Who pays for transportation of ore to works?

If the smelting works, at what rate?

PROCESS:
9. Succinct description (e. g., smelting in blast-furnaces with siliceous flux, and production of silver lead; desilverization by steam Pattisonizing; refining on tests).....

11. Capacity of works.....

11. Is any royalty paid on patented processes or apparatus?

Amount paid.....

Name and concise description of process.....

CONSUMPTION OF LABOR, POWER, AND MATERIAL:

12. Class of laborers.	Number of each employed.	Wages of each per shift.	Length of shift.	Remarks.
Foremen.....
Head smelters.....
Helpers.....
Day laborers.....

CONSUMPTION OF LABOR, POWER, AND MATERIAL—continued.
Total number of hours' manual labor performed on wages during year (calculated as if it had been performed by one man).....
Number of staff (all not employed in manual labor).....
Aggregate salaries of staff per month.....
13. Style of blast-engine.....
Maker of blast-engine.....
Number of blast-engines.....
Sizes of blast-engines.....
Pressure of blast (average).....
14. Horse-power of steam engine employed in running blast.....
Horse-power of other engines.....
Pressure of steam.....
Total quantity of water fed to boilers during year.....
Quantity and kind of fuel burned under boilers during year.....
If wood, ascertain weight per cord.....

15. Fuel consumed during year in—	Kind of fuel.	Quantity during year.	Weight per bushel.	Price at furnace.	Unit used.	Remarks.
Smelting.....
Refining.....
Roasting.....
Other purposes.....

16. Name and locality of mine supplying flux.	Quantity from each mine.	Price per ton at furnace.	Mineralogical character of flux.	Assay value, if any.
.....
.....
.....
.....

LOSSES OF METALS:
17. Percentages of assay values of metals extracted in smelting.....
18. Amount of fine-dust caught.....
Amount of metal contained in fine-dust.....
Amount of fine-dust supposed to be lost.....
How is fine-dust treated?.....
19. Quantity of matte formed per ton of ore.....
Percentage of metal in matte.....
Quantity of speiss formed per ton of ore.....

Loss in refining of	Lead.	Copper.	Silver.	Gold.
.....

Percentage of assay value lost.....

TERMS FOR CUSTOM WORK:
20. Charges for smelting ore per ton.....
Agreement, if any, as to per cent. of metal returned to mine.....
Do matte, fine-dust, and the like belong to the smelting works?.....
21. Terms on which ore is purchased (give sliding scale, if any is used).....
COST:
22. Total cost of plant.....
Cost of smelting per ton of ore.....

PRECIOUS METALS.

SCHEDULE P.—SMELTING WORKS—Continued.

PRODUCTION:

23. Amounts worked or produced during—	No. tons of ore worked.		No. tons of crude metal extracted.		No. tons of crude metal refined.		No. ounces of fine gold produced.		No. ounces of fine silver produced.		No. — of refined metal produced.	
	No. tons of ore worked.	No. tons of crude metal extracted.	No. tons of crude metal refined.	No. ounces of fine gold produced.	No. ounces of fine silver produced.	Lead.	Copper.					
Year ending June 1, 1880												
Month of June, 1879												
Month of June, 1880												

PRODUCTION—continued.

24. Assay value of—	In gold.	In silver.	In copper.	In lead.
Crude metal				
Matte				
Speiss				
Slag				

SAMPLING:

25. Describe system of sampling ore.

What assays are used?

Are assays corrected for loss in assaying?

DISPOSITION OF BULLION OR METAL:

26. To what market is it shipped?

Cost of getting it to market.

Average price received at market.

How is the metal sent to market (by what express, etc.)?

SCHEDULE P 1.—PRELIMINARY OPERATIONS.

(Reported by _____ No. ____.)

Name: ____ State or Territory: ____ County: ____ District: ____

CRUSHING:

1. Kind of crushing machine used.

Name of manufacturer _____

Size of machine _____

Number of machines _____

ROASTING:

2. Is roasting performed in heaps, stalls, kilns, or reverberatory furnaces?

Number of each _____

Number of each in actual operation _____

3. General dimensions of each.

Any important details of construction (if furnaces, name and description) _____

Material and source of lining _____

ROASTING—continued.

4. Is ore roasted in charges or continuously?

If in charges, give weight of charge and time of roasting.

Total capacity per 24 hours.

How often are repairs needed in furnace?

Kind of fuel used in roasting.

Amount of fuel used in roasting per ton of ore.

Highest temperature to which ore is brought in roasting.

5. Number of men employed per furnace.

Number of men employed in roasting; total.

If power is employed, state how much.

If any substance is added to ore, state kind and quantity per ton ore.

How complete is the roasting?

6. Method of conveying roasted ore to smelting furnace.

SCHEDULE P 2.—SMELTING IN SHAFT-FURNACES.

(Reported by _____ No. ____.)

Name: ____ State or Territory: ____ County: ____ District: ____

1. Number of furnaces _____

Number in actual operation _____

Give diagrams of interior outline of vertical section and of interior outline of horizontal section at charging floor, with dimensions.

2. What material is used for lining of furnace?

Whence obtained.

Cost of lining _____

Average duration _____

3. Has the furnace an open hearth, or is it completely closed?

Is it provided with a siphon tap?

How many tuyeres per furnace?

Diameter of tuyeres

Of what metal are they made?

Are they water-cooled or not?

Are water-jackets employed?

4. Of what material is crucible built?

Mention any other interesting details of construction.

What is the ordinary length of the run?

Do accretions form in the furnace?

Do they form at the bottom or top?

Is the furnace run with a bright top?

How often is the furnace barreled out?

What amount of ore is melted in 24 hours?

5. What kind of flux is used?

What does it cost per ton at furnace?

What amount is used per ton ore?

What kind of fuel is used?

What does it cost at the furnace?

What amount of fuel per ton ore?

If in bushels, weight of one bushel.

Pressure of blast.

6. Quantity produced per 24 hours of—	Number of tons.	Contents by assay.		
		In —	In —	In —
Metal				
Matte				
Speiss				
Slag				

7. Is the slag viscous or not?

Does it chill quickly or not?

8. Ascertain, if possible, the percentage in the slag.

Of iron _____

Silica _____

Metallic oxides, etc. _____

9. Quality and characteristics of metal _____

SCHEDULE P 3.—SMELTING IN REVERBERATORY FURNACES.

(Reported by _____ No. ____.)

Name: ____ State or Territory: ____ County: ____ District: ____

1. Number of furnaces _____

Number of furnaces in actual operation _____

2. Give diagrams of horizontal section and of longitudinal section along center line, with dimensions.

Height of stack _____

2. Of what material is hearth composed?

Of what material is roof composed?

Give source of lining and cost at furnace.

Average duration of roof and hearth _____

Is the hearth supported on iron plates?

How often is it necessary to stop furnace for repairs?

4. What kind of flux is used?

What kind of fuel is used?

If fuel is reckoned in bushels, give weight of bushel.

5. Quantity of ore per charge _____

Length of time required to work a charge _____

Production of—	No. tons produced per 24 hours.	Contents by assay.			
		In —	In —	In —	In —
Metal					
Matte					
Speiss					
Slag					

6. How is slag further treated?

Quality and characteristics of metal _____

Fuel.	Cost per unit.	Amount used per ton of ore.	Source from whence obtained.
Flux.			

APPENDIX II: SCHEDULES.

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SCHEDULE P 4.—DESILVERIZATION BY ZINC.

(Reported by ——. No. —.)

Name: ——. State or Territory: ——. County: ——. District: ——.	4. If smelted, state size of furnace, and other details, as indicated in schedule for shaft smelting furnaces.
1. Number of pots.....	5. If distilled in retorts, give—
Number in actual operation.....	(1.) Material of which retort is made.....
Size of pots.....	(2.) Total length of retort.....
Weight of furnace lead charged in a pot.....	(3.) Greatest width of retort.....
2. In how many portions is the zinc added?.....	(4.) Weight of charge.....
What is the weight of each?.....	(5.) Time required to distill a charge.....
What is the rule according to which the quantity of zinc is determined?.....	(6.) Average duration of retort (in number of charges).....
3. Is the last trace of zinc removed from the market lead by steam, or by improving in a furnace?.....	6. Give aggregate time consumed in separating a lot of furnace lead into market lead and rich lead.....
How much silver remains in the market lead?.....	Give total quantity of fuel thus consumed per ton furnace lead.....
Give method of dealing with zinc-skimmings from furnace lead.....	What is the total cost of labor involved in the separation?.....
How much rich lead is obtained per ton furnace lead?.....	What is the average wages of men employed?.....
What percentage of silver does the rich lead contain?.....	
Are the zinc crusts treated by distillation or smelting?.....	

SCHEDULE P 5.—PATTINSONIZING.

(Reported by ——. No. —.)

Name: ——. State or Territory: ——. County: ——. District: ——.	How much fuel is consumed in separating a lot of furnace lead into market lead and rich lead?.....
1. Give number of pots.....	What is total cost of labor involved in the operation per ton of furnace lead?.....
Give number of pots in actual operation.....	What wages do the men receive?.....
2. Give diagram showing disposition of plant, with measurements.....	How much fuel is consumed per ton lead separated?.....
3. State system of crystallization (by thirds, by eighths, etc.).....	What is the total cost of process per ton furnace lead?.....
4. How much rich lead is obtained on the average per ton furnace lead?.....	6. If steam is used (Luce & Rozan process), state pressure of steam.....
What percentage of silver does rich lead contain?.....	Describe superheating apparatus.....
How much silver remains in the market lead?.....	
5. What time is consumed in separating a lot of furnace lead into market lead and rich lead?.....	

SCHEDULE P 6.—IMPROVING OF LEAD.

(Reported by ——. No. —.)

Name: ——. State or Territory: ——. County: ——. District: ——.	3. At what temperature is it improved?.....
1. Number of improving furnaces.....	What length of time is consumed in softening a charge?.....
Number of improving furnaces in actual operation.....	State kind of fuel and consumption per ton of furnace lead.....
State general dimensions of furnaces with diagrams.....	What percentage of weight is lost in softening?.....
2. If the hearth is an iron pan, does it rest freely on supports?.....	4. By what is it determined whether the lead is sufficiently improved?.....
Is the pan cooled from beneath?.....	What disposition is made of the dross?.....
What is the charge of furnace lead?.....	What amount of labor is expended in refining?.....
Depth and area of melted charge.....	How long does a pan last?.....

SCHEDULE P 7.—CUPELLATION.

(Reported by ——. No. —.)

Name: ——. State or Territory: ——. County: ——. District: ——.	4. If the latter method is employed, how far is the concentration carried?.....
1. Total number of furnaces.....	How many tons of lead can be treated on the average on one test?.....
Number in actual operation.....	If the refining is divided, state for each.....
Are the furnaces of the English or German pattern?.....	How much lead is treated per day in each furnace?.....
2. If of English pattern, describe construction of test-frame, with dimensions.....	5. State fineness of bullion (gold and silver) produced.....
Give size of test.....	6. Consumption of fuel per ton lead cupelled.....
With what material is it filled?.....	Cost of labor per ton lead refined.....
Is the test water-cooled?.....	Average wages of men.....
With what results?.....	Loss in refining.....
3. Is the blast steam or air?.....	7. What disposition is made of the litharge?.....
What fuel is employed?.....	8. Total cost of refining a ton of lead.....
How is the furnace-lead fed to the test?.....	What is the assay value of the poorest lead which could be refined without absolute loss in this locality?.....
Is the refining completed on one test, or is the lead concentrated on one test and the refining completed on another?.....	

SCHEDULE Q.—QUICKSILVER REDUCTION WORKS.

(Reported by ——. No. —.)

Name: ——. State or Territory: ——. County: ——. District: ——. POSITION:	ORE TREATED:			
	6. Name and locality of mine supplying ore.	Quantity of ore from each mine for year.	Assay value of ore.	Character of ore.
1. Topographical (considerable detail is required).....				
2. Position relatively to town.....				
Relatively to mines.....				
3. Position relatively to lines of communication.....				
OWNERSHIP:				
4. Name of firm or company.....				
Main office address.....				
Capital stock.....				
Number of shares.....				
Par value.....				
Quotation May 31, 1880.....				
Working capital.....				
Name of superintendent.....				
5. Date at which the works came into present ownership.....				
Date at which the works were built.....				
Amount of real estate owned.....				
7. Who pays for transportation of ore to works?				
8. If reduction works, at what rate?				

SCHEDULE Q.—QUICKSILVER REDUCTION WORKS—Continued.

PROCESS:					
8. Succinct description of process					
9. Maximum capacity of works					
10. Is any royalty paid on patented processes or apparatus?					
Amount paid					
Name and concise description of patented process					
CONSUMPTION OF LABOR, POWER, AND MATERIAL:					
11. Table of employees' wages and shifts					
Class of laborers.	Number of each employed.	Wages of each per shift.	Length of shift.	Remarks.	
Foreman					
Head smelters					
Helpers					
Day laborers					
Total number of hours' manual labor performed during the year, calculated as if it had been done by one man					
12. Number of staff (all not employed in manual labor)					
Aggregate salaries of staff per month					
13. Style and material of suction blower					
Maker of blower					
Number of blowers in use					
Sizes of blowers					
Pressure of blast (average)					
Volume of blast (average)					
14. Horse-power of steam-engines employed in running blast					
Horse-power of other engines					
Pressure of steam					
Total quantity of water fed to boilers during year					
Quantity and kind of fuel burned under boilers during the year					
If wood, ascertain weight per cord					
CONSUMPTION OF LABOR, POWER, AND MATERIAL—continued.					
15. Quantity of fuel consumed in quicksilver reduction during the year					
16. If any flux is employed, state its character, source of supply, and price per ton at works					
LOSSES OF METAL:					
17. Percentage of quicksilver contents extracted					
18. Amount of soot formed					
19. Amount of metal contained in soot					
20. If custom-work, give rates, with details					
COST:					
21. Total cost of plant					
Cost of reduction per ton of ore					
PRODUCTION:					
22. Amount of—			During year ending June 1, 1880.	Month of June, 1879.	Month of June, 1880.
Ore worked (in tons)					
Quicksilver produced (in pounds)					
SAMPLING:					
23. Describe system of sampling ore					
What assays are used?					
Are assays corrected for loss in assaying?					
DISPOSITION OF PRODUCT:					
24. To what market is quicksilver shipped?					
Cost of getting it to market					
Average price at market					
What sort of flask is used?					
How much quicksilver does a flask hold (average)?					
How is the quicksilver sent to market?					

SCHEDULE Q 1.—QUICKSILVER REDUCTION IN RETORTS.

(Reported by _____ No. ____)

Name: _____ State or Territory: _____ County: _____ District: _____	What is the weight of a charge of ore? _____
1. Number of retorts _____ Diagrams, with dimensions of retorts _____	How long is it retorted? _____
2. What is the weight of a retort? _____ How long does the average retort last? _____	Total interval between the beginnings of two successive charges. _____
What does a retort cost at the works? _____ Average quantity of ore treated in a retort per month _____	4. How much fuel is consumed per ton ore? _____ How much quicksilver does the burned ore contain? _____ What system of condensers is used (diagrams and dimensions)? _____ Percentage of quicksilver recovered. _____
3. Average tenor of the ore. _____ What flux is added? _____ How much per ton ore? _____	5. What men are employed? _____ Length of shift _____ Wages _____

SCHEDULE Q 2.—QUICKSILVER REDUCTION IN FURNACES.

(Reported by _____ No. ____.)

Name: _____	State or Territory: _____	County: _____	District: _____	
1. Number of furnaces in the works .....	.....	If so, what fuel, and how much per ton of ore ? .....	.....	.....
Number of furnaces described in this schedule .....	.....	How much fuel is consumed per ton of ore roasted ? .....	.....	.....
System of furnaces .....	.....	How much quicksilver does the burned ore contain ? .....	.....	.....
Cost of furnaces .....	.....	6. If the furnace is intermittent, state the weight of a charge .....	.....	.....
Are they designed to work continuously or intermittently ? .....	.....	If long is it roasted ? .....	.....	.....
Are they designed to work fine ore or lump ore ? .....	.....	Total interval of time between two charges .....	.....	.....
2. Give diagrams of the furnace, with principal dimensions .....	.....	7. If the furnace is continuous, state the time during which any piece of ore is exposed to roasting action .....	.....	.....
Mention the materials used in lining, and their source .....	.....	8. If adobes are made, state how much of the ore is so treated .....	.....	.....
3. Any interesting details of construction .....	.....	What cement is used in making adobes ? .....	.....	.....
How long does the furnace last without repairs ? .....	.....	Of what size are the adobes ? .....	.....	.....
4. State the average quantity of ore treated in the furnace per month .....	.....	How long are the adobes dried ? .....	.....	.....
What is the average tenor of the ore treated in the furnace ? .....	.....	5. What men are employed at the furnace ? .....	.....	.....
What flux is added, if any ? .....	.....	Length of shift .....	.....	.....
And how much per ton of ore ? .....	.....	Wages .....	.....	.....
5. Is fuel charged with the ore ? .....	.....		

SCHEDULE Q 3.—QUICKSILVER CONDENSERS.

(Reported by _____, No. ____.)

APPENDIX III.

DIRECTORY OF DEEP MINES, AMALGAMATING MILLS, ARRASTRAS,
SMELTING WORKS, PLACER MINES, AND DITCHES.

APPENDIX III.— DIRECTORY.

[1880.]

DEEP MINES.

ALABAMA.

Name of claim.	District.	County.	Name of claim.	District.	County.
Houston & Pinson.....	Cleburne.		Riddle.....	Township 10.....	Talladega.

ARIZONA.

Alaska.....	Oro Blanco	Pima.	Flora Temple	Castle Dome.....	Yuma.
Alta.....	Owens.....	Mohave.	Fontenoy	Hualapai	Mohave.
American Flag.....	Maynard	Do.	Fresno.....	do	Do.
Anchor.....	Silver.....	Yuma.	Friond.....	Silver.....	Yuma.
Antelope.....	Maynard	Mohave.	Galena Chief.....	Castle Dome.....	Do.
Arkansaw.....	Castle Dome	Yuma.	General Lee	Cedar Valley.....	Mohave.
Arnold.....	Cedar Valley	Mohave.	Gillet	Harshaw	Pima.
Atlanta.....	Myers	Pima.	Golden Eagle	Globe	Pinal.
Baden.....	Hualapai	Mohave.	Grand Central	Tombstone	Pima.
Billy Engle.....	Cedar Valley	Do.	Grand Dipper	do	Do.
Black and Tan.....	Hualapai	Do.	Great Eastern	Silver	Yuma.
Black Rock.....	Silver.....	Yuma.	Gunsight	Cedar Valley	Mohave.
Blue Belle.....	Hualapai	Mohave.	Do	Myers	Pima.
Benton.....	Harshaw	Pima.	Hackberry	90 miles east of Mineral Park.	Mohave.
Bradshaw.....	Tombstone	Do.	Hackberry South	do	Do.
Bronze.....	Enraka	Yuma.	Hamburg	Silver	Yuma.
Bull.....	Hualapai	Mohave.	Head Centro	Castle Dome	Pima.
Bueno Vista.....	Eureka	Yuma.	Helema	Harshaw	Pima.
Bull Dog.....	Silver.....	Do.	Hermosa	Cedar Valley	Mohave.
Bullion.....	Hualapai	Mohave.	Hibernia	Holland	Pima.
Bunker Hill.....	Cedar Valley	Do.	Holland	Harshaw	Pima.
Burro.....	Silver	Yuma.	Hope	Cedar Valley	Mohave.
Cady or Juno.....	Hualapai	Mohave.	Hopkins	Castle Dome	Yuma.
Caledonia.....	Castle Dome	Yuma.	Indian Boy	Hualapai	Mohave.
Do.....	Silver	Do.	Irene	Globe	Pinal.
Corbat.....	Hualapai	Mohave.	Iron Cap	Silver	Yuma.
Champion.....	do	Do.	Ironclad	do	Do.
Cherum.....	do	Do.	Ithaca	Hualapai	Mohave.
Chief of Dome.....	Castle Dome	Yuma.	I X L	do	Do.
Cincinnati.....	Hualapai	Mohave.	Josephine	Harshaw	Pima.
Clara.....	Silver.....	Yuma.	Juniper	Silver	Yuma.
Colorado.....	do	Do.	Kinawina Belle	Do Cabezas	Pima.
Congress.....	Cedar Valley	Mohave.	Keystone	Hualapai	Mohave.
Corner.....	Hualapai	Do.	La Plata	Globe	Maricopa.
Consolidated Arizona.....	Arivaca	Pima.	Last Hope	Silver	Yuma.
Contention.....	Tombstone	Do.	Little Chap	Harshaw	Pima.
Copper Chief.....	Muntezuma	Yuma.	Little Chief	Hualapai	Mohave.
Copper King.....	do	Do.	Little Dome	Tombstone	Yuma.
Crescent.....	Myers	Pima.	Little Willie	do	Do.
Do.....	Near Mineral Park	Mohave.	Lone Star	Hualapai	Mohave.
Crystal Spar.....	Castle Dome	Yuma.	Longarina	Ore Blanco	Pima.
Cupel.....	Hualapai	Mohave.	Lost	Silver	Yuma.
Dean.....	Maynard	Do.	Lulu	do	Do.
Defiance.....	Turquoise	Pima.	MacCormick	Globe	Pinal.
Diamond.....	Harshaw	Do.	Mack Morris	do	Maricopa.
Dolly Varden.....	Hualapai	Mohave.	Mamlo	Tombstone	Pima.
Douglass.....	Castle Dome	Yuma.	Mammooth	Swisshelm	Yuma.
Eastern.....	Myers	Pima.	Do	Cherry Creek	Yavapai.
Echo.....	Montezauna	Yuma.	Mandeville	Silver	Yuma.
Edward Everett.....	Hualapai	Mohave.	Margarita	Europa	Do.
El Capitan.....	Near Pioneer	Finl.	Mariposa	Mytnard	Mohave.
Elkhorn.....	Montezuma	Yuma.	Mary Ann	Silver	Yuma.
Emerald.....	Tombstone	Pima.	Mawflower	Hualapai	Mohave.
Emma.....	Silver	Yuma.	Melissa	Silver	Yuma.
Empire.....	do	Do.	Merrimac	Tombstone	Pima.
Do.....	Hualapai	Mohave.	Metallic Accident	Hualapai	Mohave.
Do.....	Tombstone	Pima.	Mexican	Globe	Maricopa.
Engineer.....	Silver	Yuma.	Miller	Castle Dome	Yuma.
Esperanza.....	Pima	Pima.	Mineral Bed	Myers	Pinal.
Eugenia.....	Cedar Valley	Mohave.	Miner's Hope	Hualapai	Mohave.
Excelsior.....	Silver	Yuma.	Mississippi	Maynard	Do.
Fagan.....	Harshaw	Pima.	Mocking Bird	Hualapai	Do.
Fairfield.....	Hualapai	Mohave.	Monitor	Tombstone	Pima.
Flagstaff.....	do	Do.	Montana	Oro Blanco	Do.
Flora.....	do	Do.			

PRECIOUS METALS.

DEEP MINES—Continued.

ARIZONA—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Montezuma.....	Montezuma.....	Yuma.....	Signal.....	Owens.....	Mohave.....
Monumental.....	Myers.....	Pima.....	Silver Bell.....	Big Bug.....	Yavapai.....
Morality.....	Harshaw.....	Do.....	Silver Brick.....	Silver.....	Yuma.....
Morning Star.....	Myers.....	Do.....	Silver City.....	do.....	Do.....
Mountain Side.....	Silver.....	Yuma.....	Silver Era.....	Globe.....	Pinal.....
Mountain View.....	Harshaw.....	Pima.....	Silver Girt.....	Myers.....	Pima.....
Murphy.....	Dos Cabezas.....	Do.....	Silver Glance.....	Silver.....	Yuma.....
Nellie Kenyon.....	Silver.....	Yuma.....	Silver Hill.....	Hualapai.....	Mohave.....
Norfolk.....	do.....	Do.....	Silver King.....	Pioneer.....	Pinal.....
Norma.....	Castle Dome.....	Do.....	Silver Monster.....	Hualapai.....	Mohave.....
North Star.....	Silver.....	Do.....	Silver Nugget.....	Globe.....	Marirocopa.....
Northern Pacifico.....	Oro Blanco.....	Pima.....	Silver Prince.....	Peck.....	Yavapai.....
Oriental.....	Hualapai.....	Yuma.....	Silver Queen.....	Cedar Valley.....	Mohave.....
Oo.....	Ellsworth.....	Mohave.....	Sixty-three.....	Hualapai.....	Do.....
Oro Plata.....	Hualapai.....	Do.....	Snowflake.....	do.....	Do.....
Overland.....	do.....	Silver.....	South Dome.....	Castle Dome.....	Yuma.....
Pacific.....	Silver.....	Yuma.....	South King.....	Harshaw.....	Pima.....
Palmetto.....	Owens.....	Mohave.....	Spruce.....	Montezuma.....	Yuma.....
Paymaster.....	Hualapai.....	Do.....	Starks & Ewing.....	Hualapai.....	Mohave.....
Peabody.....	30 miles east of Mineral Park.....	Do.....	Stein Crusoe.....	Silver.....	Yuma.....
Peek.....	Peek.....	Yavapai.....	Stockton.....	Hualapai.....	Mohave.....
Pinkeye.....	Hualapai.....	Mohave.....	Stonewall.....	Globe.....	Marirocopa.....
Pocahontas.....	Castle Dome.....	Yuma.....	Tombsone.....	Tombstone.....	Pima.....
Prince.....	Silver.....	Do.....	Sulphuret.....	do.....	Do.....
Princess.....	do.....	Do.....	Sunrise.....	Hualapai.....	Mohave.....
Priince George.....	Hualapai.....	Mohave.....	Sunset.....	Tombstone.....	Pima.....
Pure Metal.....	do.....	Do.....	Surpriser.....	Pioneer.....	Mohave.....
Quaker.....	do.....	Do.....	Tiger.....	Hualapai.....	Yavapai.....
Queen.....	Swisshelm.....	Pima.....	Tigress.....	Tiger.....	Mohave.....
Quick Relef.....	Hualapai.....	Mohave.....	Tioga.....	Hualapai.....	Pima.....
Railroad.....	Castle Dome.....	Yuma.....	Tip Top.....	Tombstone.....	Plma.....
Rainbow.....	Ceduz Valley.....	Mohave.....	Toughnut Extension.....	Humbug.....	Yavapai.....
Rattlesnake.....	Tombstone.....	Pima.....	Toughnut & Goodenough.....	Tombstone.....	Pima.....
Do.....	Silver.....	Yuma.....	Triangle.....	do.....	Do.....
Red Cloud.....	do.....	Pima.....	True Blue.....	Tombstone.....	Do.....
Red Doe.....	Myers.....	Yuma.....	Undine.....	Harshaw.....	Do.....
Red Jacket.....	Silver.....	Pima.....	Vanderbilt.....	Hualapai.....	Mohave.....
Red Top.....	Tombstone.....	Do.....	Vulture.....	In town of Vulture.....	Marirocopa.....
Revolution.....	Harshaw.....	Do.....	Waco.....	Silver.....	Yuma.....
Richmond West.....	Globo.....	Marirocopa.....	Wander.....	do.....	Do.....
Rooster.....	Silver.....	Yuma.....	Warsaw.....	Oro Blanco.....	Pima.....
Rosano.....	Eureka.....	Do.....	W. C. Davis.....	Harshaw.....	Do.....
Rover.....	Silver.....	Do.....	Westward.....	Myers.....	Do.....
Salvador.....	Harshaw.....	Pima.....	Whalo.....	Swisshelm.....	Do.....
Sir Xavier.....	Pima.....	Do.....	William Penn.....	Castle Dome.....	Yuma.....
Schenectady.....	Hualapai.....	Mohave.....	Wilmington.....	Winchester.....	Do.....
Schuylkill.....	do.....	Do.....	Wisconsin.....	Hualapai.....	Mohave.....
Scotia.....	Harshaw.....	Do.....	Woodchoppers' Relief.....	Hualapai.....	Pima.....
Senator.....	Owens.....	Mohave.....	Yuma Chlef.....	Silver.....	Yuma.....
Setting Sun.....	Hualapai.....	Do.....			
Shenandoah.....	do.....	Do.....			

CALIFORNIA.

Addenda.....	Bodie.....	Mono.....	Comanche.....	Blind Spring.....	Mono.....
Adelaide.....	Robinson's Ferry.....	Calaveras.....	Consolidated Amador.....	Sutter Creek.....	Amador.....
Afterthought.....	Furnaceville.....	Shasta.....	Confidence.....	Coso.....	Inyo.....
Alabama.....	Jamestown.....	Tuolumne.....	Do.....	Confidence.....	Tuolumne.....
Amlia.....	Washington.....	Calaveras.....	Consolidated Pacific.....	Bodie.....	Mono.....
Antelope.....	Banner.....	San Diego.....	Consolidated Wyoming.....	Nevada City.....	Novadna.....
Apos.....	French Gulch.....	Shasta.....	Creekside.....	White Peak.....	Mono.....
App.....	Jamestown.....	Tuolumne.....	Crowning Glory.....	Cerro Gordo.....	Inyo.....
Ballychoop.....	Ballychoop.....	Trinity.....	Custer.....	Coso.....	Do.....
Baltimore.....	Lee.....	Inyo.....	Deadwood.....	Bodie.....	Mono.....
Bandin.....	Mokelumne Hill.....	Calaveras.....	Defiance.....	Blind Spring.....	Do.....
Banghart.....	Whisky Creek.....	Shasta.....	Do.....	Near Angel's.....	Calaveras.....
Banner.....	Mokelumne Hill.....	Calaveras.....	Diana.....	Volcano.....	Amador.....
Beechit Consolidated.....	Bodie.....	Mono.....	Dividend.....	Bodie.....	Mono.....
Belmont.....	Cerro Gordo.....	Inyo.....	Dolan & Cogswell.....	Oro Fino.....	Inyo.....
Belvidere.....	Bodie.....	Mono.....	Downs.....	Silverado.....	Siikiyou.....
Black Bear.....	South Fork Salmon.....	Siskiyou.....	Dudley.....	Duncan.....	Los Angeles.....
Black Hawk.....	Deadwood.....	Trinity.....	Duncan.....	Dunlap.....	San Diego.....
Black Lode.....	Bodie.....	Mono.....	Emma.....	Ferguson.....	Mariposa.....
Blue Hill.....	Oro Fino.....	Siskiyou.....	Empire.....	Ferguson.....	Siikiyou.....
Bodie Bluff Consolidated.....	Bodie.....	San Diego.....	Do.....	Plymouth.....	Amador.....
Bodie Consolidated.....	do.....	Mono.....	Eureka.....	Virginia Bar.....	Siikiyou.....
Bodie Tunnel.....	do.....	Do.....	Excelsior.....	Blind Spring.....	Mono.....
Bocker Consolidated.....	do.....	Do.....	Extra.....	Rallychoop.....	Trinity.....
Borgo Bronco.....	Beverage.....	Inyo.....	Ferguson.....	Pittsburgh.....	Shasta.....
Boston Consolidated.....	Bodie.....	Mono.....	Fletcher.....	Mariposa Estate.....	Mariposa.....
Brinch Mint.....	Coso.....	Inyo.....	Fogus.....	Oro Fino.....	Siikiyou.....
Brown Bear.....	Deadwood.....	Trinity.....	Franklin.....	Volcano.....	Amador.....
Brown Monaster.....	Russ.....	Inyo.....	Fraud.....	French Gulch.....	Shasta.....
Brush Hill.....	Hayden Hill.....	Lassen.....	Fresno Enterprise.....	Pleaccho.....	San Diego.....
Bulver Consolidated.....	Bodie.....	Mono.....	Genesee Valley.....	Potter Ridge.....	Fremno.....
Cactus.....	Lee.....	Inyo.....	Glences Consolidated.....	Genesee Valley.....	Plumas.....
Cargo Muchacho.....	Cargo Muchacho.....	San Diego.....	Gold Strike.....	Mokelumne Hill.....	Calaveras.....
Carrol.....	Quartz Valley.....	Siskiyou.....	Golden Chariot.....	Indian Valley.....	Plumas.....
Centennial.....	Lee.....	Inyo.....	Golden Eagle.....	Banner.....	San Diego.....
Do.....	French Gulch.....	Shasta.....	Golden Fleece.....	Hayden Hill.....	Lassen.....
Central.....	Ballychoop.....	Trinity.....	Golden Gato.....	Pleaccho.....	San Diego.....
Champion.....	Bodie.....	Mono.....	Do.....	Volcano.....	Amador.....
Do.....	Independence.....	Calaveras.....	Golden Thread.....	Sonora.....	Tuolumne.....
Chance.....	Pittsburgh.....	Shasta.....	Golden Wreath.....	Beverage.....	Inyo.....
Chaparral.....	Near Kelsey.....	El Dorado.....	Good Promise.....	Fish Springs.....	Do.....
Do.....	Banner.....	San Diego.....	Goodshaw.....	Pleaccho.....	San Diego.....
Chicago.....	Mokelumne Hill.....	Calaveras.....	Gracewood.....	Bodie.....	Mono.....
Christmas Gift.....	Coso.....	Inyo.....	Great Western.....	Cerro Gordo.....	Inyo.....
Cinderella.....	Deep Spring Valley.....	Do.....	Green Gulch.....	White Peak.....	Mono.....
Coe.....	Coulterville.....	Mariposa.....	Green Monster.....	Mariposa Estate.....	Mariposa.....
Cold Spring.....	French Gulch.....	Shasta.....	Green Mountain.....	Union.....	Inyo.....
Colossus.....	Union.....	Inyo.....	Gwin.....	Indian Valley.....	Plumas.....
					Cahavera.....

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

CALIFORNIA—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Harrington	Bodie	Mono	Old Coso	Coso	Inyo
Harris	Jamestown	Tuolumne	Oneida	Jackson	Amador
Hayden	Julian	San Diego	Original Amador	Amador City	Do
Hengster	Pittsburgh	Santa	Oro	Bodie	Mono
Helvetia	Julian	San Diego	Oro Fino	Union	Inyo
Henlock	Panamint	Inyo	Owens	Julian	San Diego
Heslop	Jamestown	Tuolumne	Padre	Cerro Muchacho	Do
Hidden Treasure	Picacho	San Diego	Pacific	Plymouth	Amador
Highland	French Gulch	Shasta	Peter Gass	Mokelumne Hill	Calaveras
Hite	Mariposa Estate	Mariposa	Phil Sheridan	Picacho	San Diego
Holmes	Mokelumne Hill	Calaveras	Phoenix	Coso	Inyo
Homer	Homer	Mono	Do	Silverado	Los Angeles
Honestake	Picacho	San Diego	Picacho	Picacho	San Diego
Honeycomb	French Gulch	Shasta	Plute	Plute	Mono
Howard	Quartz Valley	Siskiyou	Placerville	Placerville	El Dorado
Hubbard	Banner	San Diego	Plumas Eureka	Quartz Township	Plumas
Ida Easty	Calistoga	Napa	Plumas National	Indian Valley	Do
Idaho	Grass Valley	Nevada	Pool	Hornitos	Mariposa
Ignacio	Cerro Gordo	Inyo	Potter	Pittsburgh	Shasta
Illinois	Indian	Mono	Principal	Picacho	San Diego
Indian	Swansee	Inyo	Providence	Nevada City	Nevada
Indiana	do	Do	Queen Bee	Bodie	Mono
Istana	Furnaceville	Shasta	Rattlesnake	Ballyhoop	Trinity
Ivanpanah Consolidated	Clark	San Bernardino	Ready Relief	Banner	San Diego
Jennie June	Pittsburgh	Shasta	Do	Picacho	Do
Johnson	Quartz Valley	Siskiyou	Red Bluff	Ballyhoop	Trinity
Josephine	Coso	Inyo	Redman	Banner	San Diego
Do	Mariposa Estate	Mariposa	Reliance	Pioncho	Do
Jupiter	Bodie	Mono	Reserve	do	Inyo
Kearnsarge	Kearnsarge	Inyo	Rex Montis	Cefax	Placer
Kelty	Riverside	Tuolumne	Rising Sun	Riverside	Tuolumne
Kentuck	Banner	San Diego	Riverside	Grass Valley	Nevada
Kerrick	Blind Spring	Mono	Rocky Bar	Placerville	El Dorado
Keynot	Beverage	Inyo	Rose	Julian	San Diego
Keystone Consolidated	Amador City	Amador	San Diego	Cerro Gordo	Inyo
Keystone	Picacho	San Diego	San Lucas	Seneca	Plumas
Klamath	Sawyer's Bar	Siskiyou	Savercool	French Gulch	Shasta
Knickerbocker	Union	Inyo	Scorpion	Deep Spring Valley	Inyo
Knox & Osborne	Mokelumne Hill	Calaveras	Scout	French Gulch	Shasta
Last Chance	Picacho	San Diego	Sibyl	White Peak	Mono
Do	Quartz Valley	Siskiyou	Silver Glance	Soulsbyville	Tuolumne
Laura	Blind Spring	Mono	Soulsby	Bodie	Mono
Lizzie Bullock	Clark	San Bernardino	South Bodie	do	Do
Lone Star	Mayden Hill	Lassen	South Bulwer	Mariposa Estate	Mariposa
Lookout	Coso	Inyo	South Hite	Bodie	Mono
Louie	Picacho	San Diego	South Noonday	Picacho	San Diego
Louisiana	Cherokee	Tuolumne	South Star	Bodie	Mono
Lost Confidence	Whisky Creek	Shasta	South Standard	Picacho	San Diego
Lucky Jim	Coso	Inyo	Southern Cross	do	Do
Lyford	Blind Spring	Mono	Southern Wedge	Springfield	El Dorado
Madeira	Voleano	Amador	Springfield	Bodie	Bodie
Madden	Banner	San Diego	Standard Consolidated	San Diego	San Diego
Mad Ox	Whisky Creek	Shasta	Stonewall	Mariposa Estate	Mariposa
Madro	Cargo Muchacho	San Diego	Sueredo	Sultan Hill	Mono
Mammoth	Ballyhoop	Trinity	Tompkins	Indian	Do
Mariposa	Coso	Inyo	Union	Blind Spring	Do
Mariposa Tunnel	Mariposa Estate	Mariposa	Consolidated	Bodie	Amador
Maryland	Bodie	Mono	University	Pine Grove	San Diego
Maybell	Picacho	San Diego	Valentine	Picacho	Mono
May Lundy	Homer	Mono	Do	Bodie	Siskiyou
McClinton	Bodie	Do	Vance	do	Mono
McNulty	Placerville	Eldorado	Volunteer	Washington	Trinity
Mellones or Stanislans	Robinson's Ferry	Calaveras	do	Quartz Valley	El Dorado
Mexican	Mariposa Estate	Mariposa	do	Indian	Inyo
Minicita Bello	Lookout	Inyo	do	Deep Spring Valley	San Diego
Modoc	do	Do	do	Picacho	Trinity
Do	Blind Spring	Mono	do	Ballyhoop	El Dorado
Monitor Consolidated	Indian Valley	Plumas	do	Placerville	Inyo
Monte Christo	Deadwood	Trinity	do	Truo Augur	Trinity
Monte Richard	Jackson	Amador	do	True Gold	El Dorado
Montozuma	Dendwood	Trinity	do	Union Consolidated	Inyo
Morgan	Carson Hill	Amador	do	University	Monro
Mount Ophir	Mariposa Estate	Calaveras	do	Valentine	Calaveras
Murchie	Nevada City	Mariposa	Vance	do	Inyo
Neal	Indian	Nevada	Volunteer	do	do
Nevada City	Nevada City	Mono	Washington	do	do
New Albany	Summerville	Nevada	do	do	do
New York Hill	Grass Valley	Tuolumne	do	do	do
Ningara	French Gulch	Nevada	do	do	do
Noonday	Bodie	Mono	do	do	do
Northern Light	Pittsburgh	Shasta	do	do	do
Northern Wedge	Picacho	Shasta	do	do	do
North Extension of Boston	Mokelumne Hill	San Diego	do	do	do
North Noonday	Bodie	Calaveras	do	do	do
North Star	Picacho	Mono	do	do	do
Occidental	Ballyhoop	San Diego	do	do	do
		Trinity	do	do	do

COLORADO.

Adelaide	California	Lake	Bald Mountain	Tin Cup	Gunnison
Adelphi	Eureka	San Juan	Bogola	Uncompahgre	Ouray
Agassiz	California	Lake	Belcher	Anima	San Juan
Alabama	Uncompahgre	San Juan	Bulden	Battle Mountain	Summit
Alaska	do	Do	Belle of the West	Lake	Hinsdale
Albro	Morris	Clear Creek	Bobtail	Gregory	Gilpin
Alexander	do	Do	Bonanza	Uncompahgre	San Juan
Alta	Upper San Miguel	Oury	Bonanza Tunnel	Anima	Do
American	Gold Hill	Boulder	Boss	Quartz Valley	Gilpin
American Flag	Nevada	Gilpin	Boston	Uncompahgre	San Juan
Amie	California	Lake	Brecke Iron	California	Lake
Annie Wood	Uncompahgre	San Juan	Bull Domingo	Hardscrabble	Custer
Argentine	California	Lake	California	Yosemite	Gilpin
Aspen	Animas	San Juan	Zeile	Zeile	Hinsdale

DEEP MINES—Continued.

COLORADO—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Caribou Consolidated.....	Grand Island.....	Boulder.	Long and Derry.....	California.....	Lake.
Cashier.....	Gilpin.	London.	Mosquito.....	Park.	Park.
Catalpa.....	California.	Mackay.	Iowa.....	Clear Creek.	Clear Creek.
Centennial.....	Gregory.....	Gilpin.	Maid of the West.....	San Juan.	San Juan.
Champion.....	Idaho.....	Clear Creek.	Mammoth.....	Do.	Do.
Chrysolite.....	California.	Lake.	Mary Murphy.....	Chaffee.	Chaffee.
Cimmeron.....	Upper San Miguel.	Ouray.	Mastodon.....	San Juan.	San Juan.
Cleveland.....	Animas.....	San Juan.	Matchless.....	Lake.	Lake.
Clifford.....	York.....	Clear Creek.	Maud Monroe.....	Clear Creek.	Clear Creek.
Climax.....	California.	Lake.	Mayflower.....	Do.	Do.
Colorado Central Consolidated.....	Griffith.....	Clear Creek.	Melvine.....	Boulder.	Boulder.
Colorado Prince.....	California.	Lake.	Meyer Consolidated.....	Lake.	Do.
Cold Spring.....	Gold Hill.	Boulder.	Miner Boy.....	Do.	Do.
(Colorado Springs.....)	Buckskin.	Park.	Munie.....	Gilpin.	Gilpin.
Colorado Ter. National.....	Monarch.	Clear Creek.	Missouri.....	Animas.	Animas.
Columbia.....	Eureka.	Sun Juan.	Molas.....	Monarch.	Monarch.
Columbus.....	Monarch.	Chaffee.	Montezuma.....	Iron Springs.	Ouray.
Comstock.....	California.	La Plata.	Morning Star.....	California.	Lake.
Consolidated Hercules and Roe.....	Griffith.....	Clear Creek.	Mountain Chief.....	Gold Hill.	Boulder.
Congress.....	Mosquito.....	Park.	Mountain Lion.....	Magnolia.	Do.
Cyclops.....	Enterprise and Mountain House.	Gilpin.	Mountain Monarch.....	Third.	Huerfano.
Dexter.....	Uncompahgre.....	Ouray.	Murray.....	Montana.	Clear Creek.
Diamond Tunnel.....	Griffith.....	Clear Creek.	Muscovite.....	Do.	Do.
Do.....	Animas.....	San Juan.	Naperville.....	Summit.	Clear Creek.
Fairy Varden.....	Consolidated Montgomery.....	Park.	Nathan.....	Boulder.	Boulder.
Feminin.....	Spanish Bar.....	Clear Creek.	Native Silver.....	Clear Creek.	Clear Creek.
Donaldson.....	Tail Run.....	Do.	Neith.....	Upper Union.	Boulder.
Donna Junia.....	Spanish Bar.....	Do.	Nelson.....	Ward.	Ouray.
Durable Decker.....	California.	Lake.	Nettie.....	Iron Springs.	Do.
Dunderberg.....	Griffith.....	Clear Creek.	Nevada.....	do.	Do.
Dunkin.....	California.	Lake.	Newman.....	Pioneer.	Gilpin.
Dyer.....	do.....	Do.	New York and Colorado.	Gregory.	Boulder.
Eagle.....	Morris.	Clear Creek.	Nivot.....	Ward.	San Juan.
Eagle Bird.....	Bald Mountain.	Summit.	North Star.....	Animas.	Do.
Egyptian.....	Nevada.	Gilpin.	North Star No. 2.....	Upper San Miguel.	Ouray.
Emancipation.....	Gold Hill.	Boulder.	N. W. H., Jr.....	Galena.	Hinsdale.
Emerson.....	do.....	Do.	Ocean Wave.....	do.	Do.
Empire.....	Sugar Loaf.....	San Juan.	Ohio Consolidated.....	Iron Springs.	Ouray.
Empress.....	Animas.	Gilpin.	Oseola.....	Galena.	Hinsdale.
Equator.....	Gregory.....	Clear Creek.	Palmetto.....	Pioneer.	Ouray.
Evening Star.....	Griffith.....	Lake.	Pahnya and Oriental.	do.	Do.
Fairmount-Shatter.....	California.	Clear Creek.	Pandora and Oriental.	do.	Do.
Fanny.....	Spanish Bar.....	Gilpin.	Pattison.....	Iron Springs.	Do.
Fanny Barrett.....	Enterprise and Mountain House.	Park.	Pearl.....	Idaho.	Clear Creek.
First National.....	Mosquito.....	Clear Creek.	Pearless.....	Horseshoe.	Park.
Florence.....	Banner.	Lake.	Pearwile.....	Russell.	Gilpin.
Forest Queen.....	California.	Gunnison.	Philadelphia.	Animas.	San Juan.
Fred Rogers.....	Ruby.	Clear Creek.	Pike.....	Plata Verde.	Ouray.
Free Gold.....	Upper Union.	Chaffee.	Pioneer.....	Consolidated Ten Mile.	Summit.
Free Land.....	Free Gold.....	Clear Creek.	Do.....	Hardscrabble.	Custer.
Gen.....	Spanish Bar.....	Chaffee.	Plata Verde.....	Grand Island.	Boulder.
Geman.....	Idaho.	Clear Creek.	Poorman.....	Snowies.....	Ouray.
Glass-Pendery.....	Gregory.....	Do.	Potosi.....	Russell.	Gilpin.
Gold King.....	California.	Gilpin.	Powers.....	Arimas.	San Juan.
Golden Age.....	Upper San Miguel.	Lake.	Pride of the West.....	Gold Hill.	Boulder.
Golden Gate.....	Central.	Ouray.	Prussian.....	Nevada.	Gilpin.
Gold View.....	Uncompahgre.....	Boulder.	Pyrenees.....	do.....	Do.
Gray Copper.....	Pioneer.....	Ouray.	Ralls County.....	Uncompahgre.	San Juan.
Gray Eagle.....	Uncompahgre.....	Do.	Red Cloud.....	Downsville.	Clear Creek.
Do.....	Sugar Loaf.....	Boulder.	Red Elephant.....	Uncompahgre.	San Juan.
Great Republican.....	Hardscrabble.....	Custer.	Red Rogers.....	do.....	Ouray.
Gunnell.....	Animas.	San Juan.	Riverside.....	California.	Summit.
Hard Money.....	Eureka.	Clear Creek.	Robert E. Lee.....	Consolidated Ten Mile.	Park.
Haseltine.....	Hawkeye.	Gilpin.	Robinson Consolidated.....	Consolidated Montgomery.	Do.
Helen.....	Russell.	Do.	Russia.....	Sacramento.	San Juan.
Hercules.....	Bevan.	Do.	Saxon.....	Uncompahgre.	Gilpin.
Hibernia.....	Animas.	Summit.	Sayr Burroughs.....	Novada.	Boulder.
Hidden Treasure.....	California.	San Juan.	Seven-Thirty.....	Grand Island.	Hinsdale.
Highland Chief.....	Nevada.	Lake.	Silver Cliff.....	Silver Cliff.	Custer.
Highland Mary.....	California.	Gilpin.	Silver Cord.....	Galena.	Hinsdale.
Highlander.....	Animas.	Lake.	Silver Dollar.....	Russell.	Gilpin.
Homestake.....	Idaho.	San Juan.	Silver Wave.....	California.	Lake.
Hoosier and Goldsmith Maid.....	Homestake.	Clear Creek.	Sioux City.....	Eureka.	San Juan.
Hope.....	Gold Hill.	Lake.	Slide.....	Gold Hill.	Boulder.
Horsefall.....	Pioneer.	Boulder.	Smith.....	Gregory.	Gilpin.
Horusco.....	Grand Island.	Ouray.	Smuggler.....	Central.	Boulder.
Hudson.....	Chalk Creek.	Boulder.	Do.....	Upper San Miguel.	Ouray.
Hukill.....	Idaho.	Chaffee.	Songbird.....	Hardscrabble.	Custer.
Humboldt.....	Spanish Bar.	Clear Creek.	South American.....	Cascade.	Clear Creek.
Idaho.....	Near town of Rosita.	Do.	Specie Payment.....	Virginia.	Do.
Idaho.....	Grand Island.	Custer.	Stevens.....	Argentine.	Do.
Idaho.....	Idaho.	Boulder.	Sunshine.....	Idaho.	Do.
Idaho.....	Clear Creek.	Clear Creek.	Summit.....	Upper San Miguel.	Ouray.
Idaho.....	Gilpin.	Park.	Terrible.....	Hardscrabble.	Custer.
Idaho.....	Lake.	Ouray.	Do.....	Tom Moore.	Ouray.
Idaho.....	San Juan.	San Juan.	South American.....	Toronto.	Gilpin.
Idaho.....	Clear Creek.	Clear Creek.	Specie Payment.....	Tribune.	San Juan.
Idaho.....	Do.	Boulder.	Stevens.....	Trojan.	Boulder.
Idaho.....	Clear Creek.	Clear Creek.	Sunshine.....	Ulay and Ute.	Clear Creek.
Idaho.....	Gilpin.	Park.	Summit.....	Union.	Hinsdale.
Idaho.....	Do.	Do.	Terrible.....	United Gregory.	Ouray.
Idaho.....	Boulder.	Boulder.	Do.....	United States Depository.	Gilpin.
Idaho.....	Gilpin.	Gilpin.	Tom Moore.....	Vandusco.	Snowies.
Idaho.....	Do.	Boulder.	Tribute.....	Valley View.	Sugar Loaf.
Idaho.....	Gilpin.	Do.	Do.....	Verde.....	Iron Springs.
Idaho.....	Do.	Do.	Ulay and Ute.....	Victor.	Verde.
Idaho.....	Gilpin.	Do.	Union.....	Victor.	Idaho.
Idaho.....	Do.	Boulder.	United Gregory.....	Virginia.	Gold Hill.
Idaho.....	Gilpin.	Gilpin.	Snowies.....	Virginia.	California.
Idaho.....	Do.	Boulder.	United States Depository.....	Virginia.	Snowies.
Idaho.....	Gilpin.	Do.	Vandusco.....	Virginia.	Gregory.
Idaho.....	Do.	Do.	Valley View.....	Virginia.	Gregory.
Idaho.....	Gilpin.	Do.	Verde.....	West Flack.	Nevada.
Idaho.....	Do.	Do.	Victor.....	What Cheer.....	Iron Springs.
Kansas Lode.....	Magnolia.	Do.	Victor.....	Idaho.	Ouray.
Kent County.....	Animas.	Do.	Virginia.	Gold Hill.	Custer.
Kimestone.....	Montana.	Do.	Virginia.	California.	Boulder.
Lacrosse.....	Central.	Do.	Virginia.	Snaffles.	Ouray.
Lake.....	Nevada.	Do.	Virginia.	Snaffles.	Gilpin.
Lake Vista.....	Griffith.	Do.	Virginia.	Snaffles.	Ouray.
Lakeville Consolidated.....	Summit.	Do.	Virginia.	Snaffles.	Boulder.
Lanworth.....	California.	Do.	Virginia.	Snaffles.	Ouray.
Lanxon.....	Russell.	Do.	Virginia.	Snaffles.	Do.
Lincoln.....	Griffith.	Do.	Virginia.	Snaffles.	Ouray.
Little Annie.....	Gold Hill.	Do.	Virginia.	Snaffles.	Gilpin.
Little Chief.....	Summit.	Do.	Virginia.	Snaffles.	Ouray.
Little Pittsburgh.....	California.	Do.	Virginia.	Snaffles.	Ouray.

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

COLORADO—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
White Cloud.....	Virginia.....	Clear Creek.	Wheel of Fortune.....	Consolidated Ten Mile.....	Summit.
White Pilgrim.....	Gold Hill.....	Boulder.	Wyandotte.....	Russell.....	Gilpin.
White Quail.....	Consolidated Ten Mile.....	Summit.	Yankee Bay.....	Sneffles.....	Ouray.
Wheel of Fortune.....	Sneffles.....	Ouray.	Yellow Pine.....	Sugar Loaf.....	Boulder.

DAKOTA.

Alta.....	Rockford.....	Pennington.	Highland.....	Whitewood.....	Lawrence.
Atlantic.....	Custer.....	Custer.	High Lode.....	do.....	Do.
Badger.....	Whitewood.....	Lawrence.	Homestake.....	do.....	Do.
Black Tail.....	do.....	Do.	Hoodoo.....	Bear Butte.....	Do.
Caledonia.....	do.....	Do.	Keystone.....	do.....	Do.
California.....	Rockford.....	Pennington.	King Solomon.....	Newton Forks.....	Pennington.
Carter.....	Bear Butte.....	Lawrence.	Londola.....	Whitewood.....	Lawrence.
Champion.....	Whitewood.....	Do.	Mammoth.....	Custer.....	Custer.
Clermont.....	Bear Butte.....	Do.	Mervit No. 2.....	Bear Butte.....	Lawrence.
Cross.....	Cross.....	Pennington.	Old Bill.....	Custer.....	Custer.
David City Lighting.....	Cole.....	Custer.	Old Charlie.....	do.....	Do.
Deadwood.....	Whitewood.....	Lawrence.	Oro Cache.....	Whitewood.....	Lawrence.
El Refugio.....	Bear Butte.....	Do.	Oro Fino.....	Bear Butte.....	Do.
Escondido.....	do.....	Do.	Peccho.....	Whitewood.....	Do.
Esmeralda.....	Whitewood.....	Do.	Penobscot.....	Cole.....	Custer.
Evangeline.....	Rockford.....	Pennington.	Portland.....	Whitewood.....	Lawrence.
Fairview.....	Whitewood.....	Lawrence.	Queen Bee.....	Newton Forks.....	Pennington.
Father do Smet.....	Lost Placer.....	Do.	Quincy.....	Cross.....	Do.
Flora Belle.....	Whitewood.....	Do.	Rich.....	Bear Butte.....	Lawrence.
Florence.....	Bear Butte.....	Do.	Royal Bengal Tiger.....	Newton Forks.....	Pennington.
Giant and Old Abe.....	Whitewood.....	Do.	Savage.....	Whitewood.....	Lawrence.
Golden Gate.....	Lost Placer.....	Do.	Sir Roderick Dhu.....	do.....	Do.
Golden Terra.....	Whitewood.....	Do.	Sitting Bull.....	Bear Butte.....	Do.
Gold Finch.....	do.....	Do.	Snowstorm.....	Whitewood.....	Do.
Gopher.....	do.....	Custer.	Sunday.....	Bear Butte.....	Do.
Grand Junction.....	Whitewood.....	Lawrence.	Union Hill.....	do.....	Do.
Great Eastern.....	Custer.....	Custer.	Washington.....	do.....	Do.
Hartford.....	Whitewood.....	Lawrence.	Yellow Jacket.....	do.....	Do.
Hidden Treasure.....	Whitewood.....				

GEORGIA.

Cheynagowah.....	New Hickory Flat.....	Cherokee.	Magruder.....	Third.....	Hall.
Harris.....	Ninth.....	Hall.	Parks.....	do.....	Cherokee.
Haydon.....	do.....	Do.	Sale.....	Third.....	Lincoln.
Jennings.....	Republican.....	McDuffy.	Strickland.....	do.....	Parsyth.
Kendrick.....	do.....	Cobb.	Wilkes.....	Lutherville.....	Meriwether.

IDAHO.

Ada Ellmore.....	Rocky Bar.....	Alturas.	Californi Boy.....	Sawtooth.....	Alturas.
Ada Ellmore, first E. Ext.	do.....	Do.	Smiley's Basin.....	do.....	Do.
Ada Ellmore, second W. Ext.	do.....	Do.	Cambria.....	Bois6.	Bois6.
Adela.....	Shaw's Mountain.....	Bois6.	Cataract.....	Canyon Creek.....	Alturas.
Alabama.....	Sawtooth.....	Alturas.	Centennial.....	Sawtooth.....	Idaho.
Albion.....	Smiley's Basin.....	Do.	Chance.....	Washington.....	Lemhi.
Alps of Atlanta.....	Ells Creek.....	Do.	Charity.....	Yankee Fork.....	Owyhee.
Alta.....	Sawtooth.....	Do.	Charles Dickens.....	Carson.....	Alturas.
Alturas.....	Rocky Bar.....	Do.	Clearbrook.....	Wood River.....	Owyhee.
American Star.....	Banner.....	Do.	Clipper.....	Flint.....	Alturas.
Antelope.....	Yankee Fork.....	Bois6.	Cloud.....	Sawtooth.....	Owyhee.
Arabellia.....	Hardscrabble.....	Alturas.	Columbia.....	Bonaparte.....	Alturas.
Asteroïd.....	Bonaparte.....	Do.	Comet.....	Rocky Bar.....	Do.
Atlanta.....	Sawtooth.....	Do.	Comstock.....	Sawtooth.....	Do.
Atlantic.....	Smiley's Basin.....	Do.	Con Stock S. E. Ext.	Wagontown.....	Owyhee.
Avalanche.....	Red Warrior.....	Do.	Confederate.....	Sawtooth.....	Alturas.
Banner.....	Banner.....	Bois6.	Confederate Star.....	Granite.....	Bois6.
Banner No. 2.....	do.....	Do.	Crane and Driggs.....	Rocky Bar.....	Alturas.
Banner W. Ext.....	do.....	Do.	Crown Point.....	Canson.....	Owyhee.
Bannock.....	Carson.....	Owyhee.	Do.....	Hardscrabble.....	Alturas.
Baxter.....	Sawtooth.....	Alturas.	Do.....	Banner.....	Bois6.
Bay State.....	Carson.....	Owyhee.	Do.....	South Mountain.....	Owyhee.
Beaver.....	Sawtooth.....	Do.	Crown Point Bonanza.....	Hardscrabble.....	Alturas.
Beaver W. Ext.....	do.....	Do.	Crown Prince.....	Wagontown.....	Owyhee.
Belle.....	Bonaparte.....	Do.	Cottonwood.....	South Mountain.....	Alturas.
Belle Cora.....	Wagontown.....	Owyhee.	Custer.....	Hardscrabble.....	Owyhee.
Belle Reade.....	Carson.....	Do.	Cynosure.....	Yankee Park.....	Alturas.
Beshazzar.....	Cañon Creek.....	Bois6.	Daisy.....	Rocky Bar.....	Lemhi.
Big Croppings.....	Banner.....	Do.	Del Norte.....	Sawtooth.....	Alturas.
Bismarck.....	Wagontown.....	Do.	Desdemona.....	Banner.....	Bois6.
Black Barb.....	Wood River.....	Owyhee.	Disappointment.....	South Mountain.....	Owyhee.
Blackbird.....	Mammoth.....	Alturas.	Dixie.....	Sawtooth.....	Alturas.
Black Jack.....	Carson.....	Bois6.	Dividend.....	Hardscrabble.....	Alturas.
Black Warrior.....	Banner.....	Owyhee.	Dunmybrook Fair.....	Red Warrior.....	Do.
Blue Ledge.....	Bonaparte.....	Bois6.	Ebenezer.....	Rocky Bar.....	Do.
Bonanza of Idaho.....	Rocky Bar.....	Alturas.	Ella.....	Canon Creek.....	Bois6.
Bonaparte Consolidated.....	Bonaparte.....	Do.	Elkhorn.....	Wood River.....	Owyhee.
Boottai.....	Sawtooth.....	Do.	Ellsworth.....	Elkhorn.....	Alturas.
Buise.....	do.....	Do.	Emma.....	Carson.....	Bois6.
Buffalo.....	Rocky Bar.....	Do.	Do.....	Hardscrabble.....	Owyhee.
Do.....	Middle Bois6.....	Do.	Emigrant.....	Smiley's Basin.....	Alturas.
Buffalo and Atlantic.....	do.....	Do.	Do.....	Sawtooth.....	Bois6.
Bullion.....	Rocky Bar.....	Do.	Empire.....	Shaw's Mountain.....	Alturas.
Do.....	Wood River.....	Do.	Do.....	Sawtooth.....	Owyhee.
Bullwacker.....	Shaw's Mountain.....	Bois6.	Empire, or Victoria.....	Carson.....	Bois6.
Burnt Pilot.....	Red Warrior.....	Owyhee.	Do.....	Banner.....	Alturas.
Cabin Home No. 1.....	Sawtooth.....	Alturas.	Eureka.....	Wood River.....	Do.
Cabin Home No. 2.....	do.....	Do.	do.....	Sawtooth.....	Do.

PRECIOUS METALS.

DEEP MINES—Continued.

IDAHO—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Eureka	Elkhorn	Boisé	Mariposa	Hardscrabble	Alturas.
Fairview	Wood River	Alturas.	Martin	Smiley's Basin	Do.
Ferguson	Smiley's Basin	Do.	Mary Blaine	Carson	Owyhee.
Flagstaff	do	Do.	Mayflower	Wood River	Alturas.
Florida Hill	Carson	Owyhee.	Do.	Granite	Boisé.
Galen	Wood River	Alturas.	Midas	Bonaparte	Alturas.
Do.	South Mountain	Owyhee.	Minnie Moore	Wood River	Do.
Galveston	Banner	Boisé.	Monarch	Middle Boisé	Do.
Gem of the Mountain	do	Do.	Do	Wagontown	Owyhee.
General Custer	Yankee Fork	Lemhi.	Mono	Sawtooth	Alturas.
General Grant	Hardscrabble	Alturas.	Montana	South Mountain	Owyhee.
Do.	South Mountain	Owyhee.	Do	Smiley's Basin	Alturas.
Geneva	Sawtooth	Alturas.	Yankee Fork	Lemhi.	Do.
Gladiator	Wood River	Do.	Morning Star	Shaw's Mountain	Boisé.
Glenbrook	Carson	Owyhee.	Moses	Carson	Owyhee.
Gleconda	South Mountain	Owyhee.	Mountain Buck	Shaw's Mountain	Boisé.
Gold Bar	Granite	Boisé.	Mountain Chief	Rocky Bar	Alturas.
Gold Hill	do	Do.	Do	Sawtooth	Do.
Golden Chariot	Queen's River	Alturas.	Mudhole	Cotton Creek	Boisé.
Do.	Carson	Owyhee.	Napias	Sawtooth	Alturas.
Golden Era	Elkhorn	Boisé.	Nellie	Smiley's Basin	Do.
Golden Rule	Wagontown	Owyhee.	Nellie W. Ext	do	Do.
Golden Star	Rocky Bar	Alturas.	No Plus Ultra	Bonaparte	Do.
Goldstone	Yankee Fork	Lemhi.	New Ophir	Hardscrabble	Do.
Gov. Bennett	Red Warrior	Alturas.	New Ophir first E. Ext	do	Do.
Gov. Morton	Queen's River	Do.	New Ophir second E. Ext	do	Do.
Gov. Morton S. Ext	do	Do.	New York	Red Warrior	Do.
Granite	Granite	Boisé.	North Empire	Bonaparte	Do.
Gray Eagle	Yankee Fork	Lemhi.	North Star	Carson	Owyhee.
Great Western	Smiley's Basin	Alturas.	Do	Wood River	Alturas.
Green Mountain	Red Warrior	Do.	North Star E. Ext	Shaw's Mountain	Boisé.
Haminal	Sawtooth	Do.	Nunkeg	South Mountain	Owyhee.
Hastings Bros.	Hardscrabble	Alturas.	Oakland	Smiley's Basin	Alturas.
Hayes	Shaw's Mountain	Boisé.	Ohio	Wagontown	Owyhee.
Honiectta	Wagontown	Owyhee.	O. K.	Wood River	Alturas.
High Reef	Sawtooth	Alturas.	Old Chunk	Middle Boisé	Do.
Highland Chief	Wood River	Do.	Ontario	Wood River	Do.
Hidden Treasure	Sawtooth	Do.	Ophir	Wood River	Do.
Do.	Shaw's Mountain	Boisé.	Oregon	Wood River	Do.
Do.	Yankee Fork	Owyhee.	Orient	Smiley's Basin	Do.
Homo Resort	Carson	Alturas.	Original	Wagontown	Owyhee.
Homestake	Wood River	Owyhee.	Oro fino	Wood River	Alturas.
Hudson	Smiley's Basin	Alturas.	Do	Wood River	Do.
Ibex	Elk Creek	Do.	Osgoode	Smiley's Basin	Do.
Ida	Granite	Boisé.	Owyhee	Wagontown	Owyhee.
Idaho	Sawtooth	Alturas.	Owyhee Treasury	Wood River	Alturas.
Do.	Yankee Fork	Lemhi.	Panamint	Middle Boisé	Do.
Do.	Wagontown	Owyhee.	Parole	Wood River	Do.
Idaho or Keystone	Banner	Alturas.	Pauper	Shaw's Mountain	Do.
Idahon	Wood River	Alturas.	Paymaster	Carson	Owyhee.
Idaho Vishnu	Rocky Bar	Do.	Pennsylvania	Shaw's Mountain	Boisé.
Idlewild	Carson	Owyhee.	Perseverance	Banner	Do.
Illinois	Gambrius	Boisé.	Phil Sheridan	Phil Flint	Owyhee.
Illinois Central	Carson	Owyhee.	Pickens & Edwards	Phil Flint	Boisé.
Illinois Central N. Ext	do	Do.	Pilgrim	Pilgrim	Do.
Independence	Rocky Bar	Alturas.	Pilgrim's Mother	Pilgrim	Owyhee.
Do.	Shaw's Mountain	Boisé.	Pinta	Pilgrim's Mother	Do.
Iowa	South Mountain	Owyhee.	Pioneer	Pinta	Do.
Itasca	Smiley's Basin	Alturas.	Do	Pioneer	Do.
Jay Gould	Granite	Boisé.	Plymouth	Plymouth	Owyhee.
J. B. Dodge	Rocky Bar	Alturas.	Polar Star	Polar Star	Alturas.
J. B. Warren	Wagontown	Do.	Pompeii	Pompeii	Owyhee.
Jessie	do	Do.	Do	Poorman	Alturas.
Jessie Benton	South Mountain	Alturas.	Poorman	Do	Do.
Joe Daly	Middle Boisé	Boisé.	Poorman N. Ext.	Poorman	Owyhee.
Joe Daly first E. Ext.	Queen's River	Alturas.	Potosi	Potosi	Do.
Joe Daly second W. Ext.	do	Do.	Pride of the West	Pride of the West	Alturas.
John Bell	do	Do.	Do	Rainbow	Boisé.
John Schaeffer	Granite	Alturas.	Do	Ramshorn	Owyhee.
Josephine	Red Warrior	Owyhee.	Do	Rattling Jack	Lemhi.
Justice	Carson	Boisé.	Do	Red Bird	Owyhee.
Keystone	Granite	Alturas.	Do	Red Elephant	Alturas.
King Bee	Wood River	Alturas.	Do	Red Fox	Do.
Ladd & Reed	Shaw's Mountain	Boisé.	Do	Red Jacket	Owyhee.
Lady Franklin	Carson	Owyhee.	Rescue	South Mountain	Alturas.
Lake	Sawtooth	Alturas.	Revenue	Shaw's Mountain	Boisé.
Do.	Yankee Fork	Lemhi.	Richmond	South Mountain	Owyhee.
Last Chance	Hardscrabble	Alturas.	Rising Sun	Rising Sun	Alturas.
Do.	Smiley's Basin	Do.	Do	Do	Do.
Do.	Yankee Fork	Lemhi.	Rising Star	Do	Bolé.
Lawyer	Wagontown	Owyhee.	Rising Star N. Ext.	Do	Owyhee.
Lazey	Granite	Boisé.	Robio	South Mountain	Do.
Lemhi	South Mountain	Owyhee.	Rose	Do	Do.
Lion	Smiley's Basin	Alturas.	Rough and Ready	Wood River	Alturas.
Little Joe Daly	do	Do.	Ruth	Sawtooth	Do.
Little Rhody	Queen's River	Do.	Sands or Silver City	Carson	Owyhee.
Live Yankee	South Mountain	Owyhee.	Savage	Do	Do.
Lone Star	Queen's River	Alturas.	Do	Queen's River	Alturas.
Lone Tree	Granite	Boisé.	Sawtooth	Sawtooth	Do.
Lookout	Carson	Owyhee.	Scorpion	Smiley's Basin	Do.
Lucky Boy	Wood River	Alturas.	Scotia	Wood River	Do.
Lymn Ward	Sawtooth	Do.	Senator	Sawtooth	Do.
Maggie	Bonaparte	Do.	Sherman	Wood River	Do.
Magnetic Iron	Wagontown	Owyhee.	Shoshone	Hardscrabble	Do.
Mahogany or Corduroy	South Mountain	Do.	Silver Beam	Silver Beam	Do.
Mammoth	Carson	Do.	Silver Chief	Sawtooth	Do.
Do.	North Fork	Do.	Silver Cord	Bonaparte	Do.
Do.	Queen's River	Do.	Silver Glance	Banner	Boisé.
Do.	Rocky Bar	Do.	Silver King	Queen's River	Owyhee.
Do.	Sawtooth	Do.	Do	Smiley's Basin	Alturas.
Mammoth	Mammoth	Boisé.	Do	Shaw's Mountain	Boisé.
Do.	North Fork	Alturas.	Do	Do	Do.
Mammoth first E. Ext.	do	Do.	Do	Do	Do.
Mammoth second W. Ext.	do	Do.	Do	Do	Do.

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

IDAHO—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Silver Peak.....	Banner.....	Boise.....	Washoe.....	Banner.....	Boise.....
South Empire.....	Carson.....	Owyhee.....	Washington.....	Sawtooth.....	Alturas.....
South Chariot.....	do.....	Do.....	Washington S. Ext.....	Queen's River.....	Do.....
St. Cliffs.....	Wagontown.....	Do.....	Webfoot.....	do.....	Do.....
St. John.....	do.....	Do.....	Do.....	Smiley's Basin.....	Do.....
Star of the West.....	Banner.....	Boise.....	West Confederate Star.....	Wagontown.....	Owyhee.....
Star.....	Wood River.....	Owyhee.....	White.....	Rocky Bar.....	Alturas.....
Stoddard.....	Wagontown.....	Do.....	Whisky.....	Yankee Fork.....	Lemhi.....
Stormy Hill.....	Carson.....	Alturas.....	Whisky Gulch.....	Carson.....	Owyhee.....
Steward.....	Bonaparte.....	Boise.....	White Bird.....	Wood River.....	Do.....
Sub Rosa.....	Gambrius.....	Lemhi.....	Wide West.....	Red Warrior.....	Owyhee.....
Summit.....	Yankee Fork.....	Alturas.....	Do.....	Carson.....	Alturas.....
Summit No. 1.....	Sawtooth.....	Do.....	Wildcat.....	Red Warrior.....	Owyhee.....
Summit No. 2.....	do.....	Do.....	Wilson.....	Carson.....	Alturas.....
Sunbeam.....	do.....	Do.....	Wire Silver.....	Wagontown.....	Owyhee.....
Sunburst.....	do.....	Owyhee.....	Witch of Owyhee.....	Sawtooth.....	Alturas.....
Surplus North Empire.....	Carson.....	Do.....	Wizard King.....	Carson.....	Owyhee.....
Surplus Oro Fino.....	Middle Boise.....	Alturas.....	Wolverine.....	Rocky Bar.....	Alturas.....
Tahoma.....	Red Warrior.....	Do.....	Wolverine N. E. Ext.....	Banner.....	Boise.....
Tenino.....	Sawtooth.....	Do.....	Yankee.....	do.....	Do.....
Tip Top.....	Yankee Fork.....	Lemhi.....	Yankee Fork.....	Yankee Fork.....	Lemhi.....
Tonto.....	Bonaparte.....	Alturas.....	Yellow Jacket.....	do.....	Do.....
Triumph.....	Yankee Fork.....	Lemhi.....	Yellow Jacket N. E. Ext.....	Granite.....	Boise.....
Unknown.....	Rod Warrior.....	Alturas.....	Yreka.....	South Mountain.....	Do.....
Victor.....	Smiley's Basin.....	Do.....	Zulu.....	Wagontown.....	Owyhee.....
Vienna.....	Carson.....	Owyhee.....			Do.....
War Eagle.....					

MAINE.

Action Consolidated.....	Aetion.....	York.	Goldsboro.....	Goldsboro.....	Hancock.
Ashley.....	Sullivan.....	Hancock.	Harrington.....	Carmel.....	Penobscot.
Cherryfield.....	Fifth.....	Washington.	Milton.....	Sullivan.....	Hancock.
Consolidated Hampden.....		Penobscot.	Sullivan.....	West Sullivan.....	Do.
Door Isle.....	Goldsboro.....	Hancock.	Waukeg.....	Sullivan.....	Do.
Golden Circle.....	Sullivan.....	Do.			

MONTANA.

Albion.....	Silver Creek.....	Deer Lodge.	Keating.....	Cedar Plains.....	Jefferson.
Algonquin.....	Flint Creek.....	Do.	Kookuk.....	Trapper.....	Beaver Head.
Alice.....	Summit Valley.....	Do.	Late Acquisition.	Summit Valley.....	Deer Lodge.
Al'a.....		Jefferson.	Lexington.....	do.....	Do.
A. M. Holts.....	Elkhorn.....	Do.	Little Giant.....	Montana.....	Jefferson.
Anaconda.....	Summit Valley.....	Deer Lodge.	Mantle.....	Cataract.....	Do.
Anglo-Saxon.....	do.....	Do.	McClellan Gulch.....	McClellan Gulch.....	Deer Lodge.
Anselmo.....	do.....	Do.	Morning Star.....	Summit Valley.....	Do.
Aurora Borealis.....	Silver Star.....	Madison.	Mount Pleasant.....	Stemple.....	Lewis and Clarke.
Bell.....	Summit Valley.....	Deer Lodge.	Mountain Boy.....	Independence.....	Deer Lodge.
Belmont.....	Silver Creek.....	Lewis and Clarke.	National.....	Summit Valley.....	Do.
Bluebird.....	Stemple.....	Do.	Nettle.....	do.....	Do.
Blue Grass.....	Bannock.....	Beaver Head.	North Star.....	do.....	Do.
Bonz.....	Lower Hot Spring.....	Madison.	Penobscot.....	Silver Creek.....	Do.
Bonanza Chief.....	Bannock.....	Jefferson.	Red Bluff.....	Hot Springs.....	Madison.
Boulder.....	Cataract.....	Do.	Red Cliff.....	do.....	Do.
Bradway.....	Silver Star.....	Madison.	Salmon.....	Flint Creek.....	Deer Lodge.
Clear Grit.....	Summit Valley.....	Deer Lodge.	Sandford.....	Stemple.....	Lewis and Clarke.
Colusa.....	do.....	Do.	Scratch Owl.....	Flint Creek.....	Deer Lodge.
Cora.....	Red Bluff.....	Do.	Sol-fising.....	Indep.idence.....	Do.
Cordwainer.....	Bannock.....	Madison.	Shakespeare.....	Summit Valley.....	Do.
Dakota.....	Bald Mountain.....	Beaver Head.	Shonbar.....	do.....	Do.
Dakota No. 5.....	Bannock.....	Do.	Silverbow.....	do.....	Do.
Deer Lodge.....	Ottawa.....	Deer Lodge.	Snowbridge.....	Silver Creek.....	Do.
Drummond.....	Bannock.....	Lewis and Clark.	Speckled Trout.....	Flint Creek.....	Do.
Excelsior.....	Bald Mountain.....	Beaver Head.	Springfield.....	Bannock.....	Beaver Head.
Elkhorn.....	Bald Mountain.....	Do.	do.....	Summit Valley.....	Deer Lodge.
French.....	Bald Mountain.....	Do.	Star West.....	do.....	Do.
Gagnon.....	Bannock.....	Deer Lodge.	Stevens.....	Owyhee.....	Lewis and Clarke.
Golden Leaf.....	Summit Valley.....	Beaver Head.	Union No. 2.....	Summit Valley.....	Deer Lodge.
Grasshopper.....	Bannock.....	Madison.	Utah.....	Volunteer.....	Do.
Grub Stake.....	Silver Star.....	Do.	Wabash.....	do.....	Do.
Hecla Consolidated.....	Silver Shower.....	Beaver Head.	Bannock.....	Bannock.....	Beaver Head.
Hickey.....	Trapper.....	Lewis and Clarke.	Stemple.....	Stemple.....	Lewis and Clarke.
High Ore.....	Stemple.....	Deer Lodge.	White Pine.....	Mineral Hill.....	Madison.
Hope.....	Summit Valley.....	Do.			
	Flint Creek.....				

NEVADA.

Adams Hill Consolidated.....	Tuscarora.....	Elko.	American.....	The Comstock.....	Storey.
Adventure.....	Mount Rose.....	Humboldt.	Do.....	do.....	Do.
A. gassiz.....	The Comstock.....	Storey.	American Eagle.....	do.....	Pioche.
Alabama.....	do.....	Do.	American Flag.....	Lincoln.....	Storey.
Alameda.....	Union.....	Nev.	American Flat.....	The Comstock.....	Do.
Albion.....	Eureka.....	Storey.	Andes.....	do.....	Do.
Alexander.....	The Comstock.....	Do.	Andrews.....	do.....	Esmeralda.
Alexandria.....	Eureka.....	Do.	Antelope.....	The Comstock.....	Storey.
Athambra.....	The Comstock.....	Do.	Arctic.....	Tuscarora.....	Elko.
Alice.....	Buckskin.....	Humboldt.	Argenta.....	The Comstock.....	Storey.
Allon or Peruvian.....	The Comstock.....	Storey.	Arizona.....	do.....	Do.
Alpha.....	do.....	Do.	do.....	Montezuma.....	Esmeralda.
Alpine.....	do.....	Do.	Arthur.....	Mount Rose.....	Humboldt.
Alta.....	do.....	Do.	Astor.....	Silver Peak.....	Esmeralda.
Alta (patent).....	do.....	Do.	Atlantic.....	The Comstock.....	Storey.
Amazon.....	do.....	Do.	Aurora.....	Good Hope.....	Elko.
Do.....	Good Hope.....	Elko.	Do.....	Esmeralda.....	Esmeralda.
America.....	The Comstock.....	Storey.			

PRECIOUS METALS.

DEEP MINES—Continued.

NEVADA—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Bailey	The Comstock	Storey.	Curtis	Reese River	Lander.
Balmoral	Columbus	Esmeralda.	Daney	The Comstock	Storey.
Baltic	The Comstock	Storey.	do	do	Do.
Baltimore-American	do	do	Daniel Webster	do	Do.
Baltimore Consolidated	do	do	Dardanelles	do	Lincoln.
Basin	Tuscarora	Elko.	Davy	Jack Rabbit	Storey.
Bayfield	I. X. L.	Churchill.	Dayton	The Comstock	Do.
Belchardin	The Comstock	Storey.	Dayton No. 2	do	Do.
Belcher	do	do	Dean	do	Do.
Belcher Extension	do	do	Death Valley	Lida Valley	Esmeralda.
Belting	Columbus	do	De Forest	The Comstock	Storey.
Belle Isle	Tuscarora	Elko.	De Frees	Tuscarora	Elko.
Belmont	Philadelphia	Nye.	Delaware	The Comstock	Storey.
Benjamin	The Comstock	Storey.	Del Roy	do	Do.
Fenton	do	do	Dexter	do	Do.
Best & Belcher	do	do	Diamond	do	Do.
Big Indian	Mount Grant	Esmeralda.	Dinero	Columbus	Esmeralda.
Big Nick	Mount Rose	Humboldt.	Dios Senor	The Comstock	Storey.
Big Prize	do	do	Dolores	Pine Grove	Esmeralda.
Bismarck	Columbus	Esmeralda.	Doran	Columbus	Do.
Black Horse	Black Mountain	do	Drexel	The Comstock	Storey.
do	Cambridge	do	Drunkwater	Silver Peak	Esmeralda.
Black Prince	I. X. L.	Churchill.	Dunderberg	Eureka	Eureka.
Black Warrior	Silver Peak	Esmeralda.	E. Chapin	The Comstock	Storey.
Blaisdell	Cambridge	do	E. Comstock	do	Do.
Bluebell	Mount Rose	Humboldt.	E. Europa	do	Do.
Blue Jacket	Blue Jacket	Elko.	E. Overman	do	Do.
do	The Comstock	Storey.	E. Savage	do	Do.
Boehler	do	do	E. Star	do	Do.
Bouenza	Gillis Mountain	Nye.	E. Yellow Jacket	do	Do.
Bournelly	The Comstock	Storey.	Eagle	Eureka	Esmeralda.
Boyle	do	do	Eastern Belle	Columbus	Do.
Brilliant	Union	Nye.	Eastern Slope	Esmeralda	Humboldt.
Brooklyn	The Comstock	Storey.	Do.	Buckskin	Churchill.
Brown	do	do	Eastern Star	I. X. L.	Esmeralda.
Brown's Hope	Lida Valley	Esmeralda.	East Mount Diablo	Columbus	White Pine.
Buckeye	Good Hope	Elko.	Eberhardt and Aurora	White Pine	Storey.
do	The Comstock	Storey.	Edinburgh	The Comstock	Eureka.
Bullion	do	do	Eldorado No. 2	Eldorado	Storey.
do	Montezuma	Esmeralda.	Elevator	The Comstock	Storey.
Bullion of Paradise	Mount Rose	Humboldt.	Ella	Good Hope	Elko.
Burning Moscow	Columbus	Esmeralda.	Elliot	The Comstock	Storey.
Caldwell	The Comstock	Storey.	Ellsworth	Mammoth	Nye.
Caledonia	do	do	Emma	Buckskin	Humboldt.
California	do	do	Do.	Rebel Creek	Do.
do	do	do	Emigrant	The Comstock	Storey.
Carson	Eureka	Eureka.	Empire	Esmeralda	Esmeralda.
Catskill	The Comstock	Storey.	Enderwood	The Comstock	Storey.
Cavour	do	do	Endowment	Black Mountain	Esmeralda.
Centennial	Lida Valley	Elko.	English Company	The Comstock	Storey.
do	Tuscarora	Storey.	Enterprise	do	Do.
Center Lode	The Comstock	Esmeralda.	Do.	Columbus	Esmeralda.
Cherokee	do	do	Equator	do	Do.
Chief of the Hill	Columbus	Esmeralda.	Esmeralda	The Comstock	Storey.
Chieftain	The Comstock	Storey.	Esperance	do	Do.
Chihuahua	Silver Peak	Esmeralda.	Esperanza	do	Do.
Chloride	Columbus	do	Essex	do	Do.
Chollar	The Comstock	Storey.	Esta Buena	Mammoth	Nye.
Chonta	do	do	Estello	The Comstock	Storey.
do	Lida Valley	Elko.	Ethan Allen	Rebel Creek	Humboldt.
Cinderella	The Comstock	Storey.	Eureka	Eureka	Eureka.
City of Melbourne	do	do	Europa	The Comstock	Storey.
Clemens	do	do	Excelsior	Silver Mountain	Esmeralda.
Cliff House	do	do	Excelsior Consolidated	Esmeralda	Do.
Clyde	do	do	Exchange	Cherry Creek	White Pine.
Coal Burner	Oncota	Esmeralda.	Exchequer	The Comstock	Storey.
Cole	The Comstock	Storey.	Fairfax	do	Do.
Colorado	do	do	Falcon	Rock Creek	Elko.
Colossus	do	do	Florida	The Comstock	Storey.
Columbia	do	do	Fourth of July	do	Eureka.
do	Columbus	Esmeralda.	Francisco Marsano	Eureka	Storey.
Columbia Consolidated	Columbia	Elko.	Frankel	The Comstock	Do.
Columbus	Rebel Creek	Humboldt.	Franklin-German	do	Do.
Comet	The Comstock	Storey.	French	do	Do.
Comet Extension	do	do	Front Lode Consolidated	do	Do.
Compromise	do	do	Fry	do	Do.
Concordia	do	do	Do.	do	Do.
Confidenco	do	do	Garibaldi	Esmeralda	Eureka.
Cortez	Esmeralda.	Esmeralda.	Garrison	Cortez	Do.
Consolidated Virginia	The Comstock	Storey.	Geddes & Bertrand	Secret Cañon	Storey.
Cook & Gray	do	do	Genesee	The Comstock	Esmeralda.
Cosmopolitan	do	do	General Jackson	Columbus	Do.
do	do	do	General Thomas	do	Do.
Coso	do	do	General Washington	Georgia	Storey.
Coupon	do	do	German	The Comstock	Do.
Coupon No. 2	do	do	Gila	do	Do.
Coye	do	do	Do.	Revelle	Nye.
Crevico	do	do	Gladding	Volcano	Esmeralda.
Crockett	Esmeralda.	Esmeralda.	Glasgow	The Comstock	Storey.
Crosnus	Rebel Creek	Humboldt.	Glen	do	Do.
Cromer	The Comstock	Storey.	Globe	do	Do.
Crowning Glory	Silver Peak	Esmeralda.	Glory	Silver Peak	Esmeralda.
Crown Point	The Comstock	Storey.	Do.	Mount Rose	Humboldt.
Crown Point Extension	do	do	Golden Age	Esmeralda	Esmeralda.
Crown Point Ravine	do	do	Golden Arrow	The Comstock	Storey.
Crystal Ridge	do	do	Gold Hill	do	Do.
Culver	do	do	Gold Hill Tunnel	do	Do.
Culver addition	do	do	Gold Lead	do	Do.
Curtis	do	do	Gold Lent	do	Do.
			Gold Note	Rock Creek	Elko.
			Goodman & Curry	The Comstock	Storey.
			Grand Prize	Tuscarora	Elko.
			Grant	The Comstock	Storey.

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

NEVADA—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Great American Rooster.....	Union.....	Nye.....	Lucky Hill.....	Columbus.....	Esmeralda.....
Great Eastern.....	The Comstock.....	Storey.....	Mackay.....	The Comstock.....	Storey.....
Great Western.....	do.....	do.....	Macon City.....	Eureka.....	Eureka.....
Green.....	Cambridge.....	Esmeralda.....	Magnet.....	Esmeralda.....	Humboldt.....
Green Mountain.....	The Comstock.....	Storey.....	Mammoth.....	Mount Rose.....	Elko.....
Grosh.....	Silver Star.....	Esmeralda.....	Mammoth.....	Roach Creek.....	Lander.....
Grosh Consolidated.....	The Comstock.....	Storey.....	Do.....	Reese River.....	Storey.....
Gulch.....	do.....	Do.....	Manhattan Consolidated.....	The Comstock.....	Do.....
Halo & Norcross.....	Mount Rose.....	Humboldt.....	Margarita No. 2.....	do.....	Do.....
Halo & Norcross, S. E. Ext.....	The Comstock.....	Storey.....	Margarita.....	Buckskin.....	Humboldt.....
Hamburg.....	do.....	Do.....	Marietta.....	The Comstock.....	Storey.....
Hardy.....	Eureka.....	Storey.....	Marsano.....	de.....	Do.....
Harlem.....	The Comstock.....	Do.....	Marvel.....	do.....	Do.....
Hartford.....	do.....	Do.....	Mary.....	do.....	Do.....
Hawkeye.....	do.....	Do.....	Mary Ann.....	do.....	Do.....
Hawley Consolidated.....	do.....	Do.....	Maryland.....	do.....	Do.....
Hayward.....	do.....	Do.....	Mary Wilder.....	Congo.....	Humboldt.....
Hector.....	do.....	Do.....	Mayflower.....	Mount Rose.....	Do.....
Henry Clay.....	do.....	Do.....	McErlain.....	The Comstock.....	Do.....
Hercules.....	do.....	Do.....	McGinnis & Bazar.....	do.....	Do.....
Hightbridge.....	Philadelphia.....	Do.....	McKibben.....	do.....	Do.....
Hillside.....	Bristol.....	Nye.....	McMahon & Irvine.....	Union.....	Nye.....
Do.....	The Comstock.....	Lincoln.....	Meadow Valley.....	Ely.....	Lincoln.....
Holman.....	do.....	Storey.....	Menomon.....	The Comstock.....	Storey.....
Holmes.....	Columbus.....	Esmeralda.....	Memphis.....	do.....	Do.....
Homestake.....	Silver Peak.....	Eureka.....	Mendha.....	Bristol.....	Lincoln.....
Hoose.....	Eureka.....	Esmeralda.....	Mettalic.....	Columbus.....	Esmeralda.....
Humboldt.....	Esmeralda.....	Eureka.....	Metea.....	The Comstock.....	Storey.....
Idaho.....	Eureka.....	Esmeralda.....	Metropolitana.....	do.....	Do.....
Illinois.....	Lodi.....	Eureka.....	Mexican.....	do.....	Do.....
Imperial.....	The Comstock.....	Esmeralda.....	Miami.....	do.....	Do.....
Independence.....	Tuscarora.....	Eureka.....	Midas.....	do.....	Do.....
Independent.....	The Comstock.....	Esmeralda.....	Mint.....	do.....	Do.....
Indianapolis.....	Union.....	Eureka.....	Mississippi.....	do.....	Do.....
Indian Queen.....	Oneota.....	Esmeralda.....	Missouri.....	do.....	Do.....
Indian Queen No. 2.....	do.....	Do.....	Mitchell.....	do.....	Do.....
Indian Queen No. 3.....	do.....	Do.....	Modoc Chief.....	do.....	Do.....
Indian Queen No. 4.....	do.....	Do.....	Monitor.....	Montezuma.....	Esmeralda.....
Industry.....	The Comstock.....	Do.....	Minot-Belmont.....	Philadelphia.....	Nye.....
Insurance.....	do.....	Do.....	Monte Christo.....	The Comstock.....	Storey.....
Inter-ocean.....	Alum Creek.....	Do.....	Monte Christo No. 2.....	do.....	Do.....
Iowa.....	The Comstock.....	Do.....	Monumental.....	do.....	Do.....
Iowa Consolidated.....	Rebel Creek.....	Do.....	Mooney & Whiteman.....	do.....	Do.....
Irving.....	The Comstock.....	Do.....	Moor & Morgan.....	do.....	Do.....
I. X. L.....	I. X. L.....	Do.....	Mourning Star No. 2.....	do.....	Do.....
Jackson.....	Eureka.....	Do.....	Mountain Buck.....	Buckskin.....	Humboldt.....
Do.....	The Comstock.....	Do.....	Mountain King.....	Bradsaw.....	Do.....
Jacob Little.....	do.....	Do.....	Mountain View.....	The Comstock.....	Storey.....
James.....	do.....	Do.....	Mount Diablo.....	Columbus.....	Esmeralda.....
Joe Seates.....	do.....	Do.....	Mount Potosi.....	do.....	Do.....
John Amer.....	do.....	Do.....	Mount Vernon.....	do.....	Do.....
Jolly.....	Columbus.....	Esmeralda.....	Morey.....	do.....	Do.....
Julia.....	The Comstock.....	Storey.....	Murphy.....	Twin River.....	Do.....
Julia E. Ext.....	do.....	Do.....	N. Chipman.....	The Comstock.....	Storey.....
Julia N. No. 2.....	do.....	Do.....	N. Comstock.....	do.....	Do.....
Jumpers.....	Silver Star.....	Esmeralda.....	N. Consolidated Virginia.....	do.....	Do.....
Junita.....	Esmeralda.....	Do.....	N. Dayton.....	do.....	Do.....
Jura.....	The Comstock.....	Do.....	N. Knickerbocker.....	do.....	Do.....
Justies.....	do.....	Do.....	N. Lexington.....	do.....	Do.....
Do.....	Oneota.....	Do.....	N. Mexican.....	do.....	Do.....
Kale Seed.....	The Comstock.....	Esmeralda.....	N. Milton.....	do.....	Do.....
Kate.....	do.....	Do.....	N. Occidental.....	do.....	Do.....
Kennebec.....	Central.....	Do.....	N. Ophir.....	do.....	Do.....
Kentuck.....	The Comstock.....	Do.....	N. Prospect.....	do.....	Do.....
Keystone.....	do.....	Do.....	N. Star.....	do.....	Do.....
Do.....	Eureka.....	Do.....	Nagle.....	do.....	Do.....
Kit Carson.....	do.....	Do.....	Navajo.....	Tuscarora.....	Esmeralda.....
K. K. Consolidated.....	The Comstock.....	Do.....	Navajo.....	Montezuma.....	Storey.....
Knickerbocker.....	do.....	Do.....	No. 2.....	The Comstock.....	Do.....
Kossuth.....	do.....	Do.....	Nevada No. 3.....	do.....	Do.....
Kossuth Ext.....	do.....	Do.....	New Boston.....	Silver Star.....	Nye.....
Lady Washington.....	do.....	Do.....	New Empire State.....	The Comstock.....	Storey.....
La Fayette.....	do.....	Do.....	New England.....	Columbus.....	Esmeralda.....
Lang Sync.....	Sierra.....	Humboldt.....	New Oregon.....	The Comstock.....	Storey.....
Lanza.....	The Comstock.....	Storey.....	New York.....	do.....	Do.....
La Plata.....	do.....	Do.....	Niagara.....	Silver Peak.....	Esmeralda.....
Lassen.....	do.....	Do.....	Nigger Ravine.....	The Comstock.....	Storey.....
Last Chance.....	Esmeralda.....	Do.....	North.....	do.....	Do.....
Do.....	Silver Peak.....	Do.....	North Bell Isle.....	Tuscarora.....	Esmeralda.....
Lawson.....	Mammoth.....	Do.....	Northern Bell.....	Columbus.....	Storey.....
Lee.....	The Comstock.....	Do.....	Northern Light.....	The Comstock.....	Do.....
Leopard.....	do.....	Do.....	Ocidental.....	do.....	Do.....
Leviathan.....	Cornucopia.....	Do.....	Ohio.....	Ohio.....	Do.....
Lexington.....	The Comstock.....	Do.....	Ophir.....	Rebel Creek.....	Humboldt.....
Do.....	do.....	Do.....	Original Gold Hill.....	The Comstock.....	Storey.....
Liberty.....	Esmeralda.....	Do.....	Orleans.....	do.....	Do.....
Lida Belle.....	San Antonio.....	Do.....	Oro.....	do.....	Do.....
Lida Hill.....	Lida Valley.....	Do.....	Overman.....	do.....	Do.....
Lime Point.....	Silver Star.....	Do.....	Overman No. 2.....	do.....	Do.....
Lincoln.....	The Comstock.....	Do.....	Overtime.....	do.....	Do.....
Lison.....	Mammoth.....	Do.....	Pago & Kelly.....	Good Hope.....	Elko.....
Little Giant.....	The Comstock.....	Do.....	Panmetto.....	The Comstock.....	Storey.....
Little Potosi.....	Columbus.....	Do.....	Panther.....	Cornucopia.....	Elko.....
Little York.....	The Comstock.....	Do.....	Paradise Valley.....	Mount Rose.....	Humboldt.....
Lloyd.....	Union.....	Do.....	Patten.....	The Comstock.....	Storey.....
Lodi.....	Lodi.....	Do.....	Pymaster.....	Rebel Creek.....	Humboldt.....
Lockout.....	The Comstock.....	Do.....	Pearson.....	Ward.....	White Pine.....
Lord of Lorne.....	do.....	Do.....	The Comstock.....	The Comstock.....	Storey.....
Louisiana.....	Montezuma.....	Do.....			
Loverly.....	The Comstock.....	Do.....			
Low Range.....	do.....	Do.....			
Lucerne.....	do.....	Do.....			
Lucky Dog.....	Buena Vista.....	Humboldt.....			

PRECIOUS METALS.

DEEP MINES—Continued.

NEVADA—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Pedro	Columbus	Esmeralda	Star	Cherry Creek	White Pine.
Peru	do	Do.	Star of Nevada	Columbus	Esmeralda.
Peytona	The Comstock	Storey.	Starr & Grove	Lewis	Lander.
Phoenix	Eureka	Eureka.	State Line	Gold Mountain	Esmeralda.
Phoenix-Western	The Comstock	Storey.	Sterling	Buckskin	Humboldt.
Pictor	do	Do.	Stevens	The Comstock	Storey.
Pioneer	do	Do.	St. John's	do	Do.
Piute	do	Do.	St. Lawrence	do	Do.
Do.	Mammoth	Nye.	St. Louis	do	Do.
Plato	The Comstock	Storey.	Storey	do	Do.
Pleiaides	Ward	White Pine.	Storm King	Union	Nye.
Plutus	The Comstock	Storey.	Street and Blanche	Mount Rose	Humboldt.
Pocotillo	Silver Peak	Esmeralda.	Stump & Adams	Columbus	Esmeralda.
Poor	Esmeralda	Do.	Succor	The Comstock	Storey.
Porphyry	The Comstock	Storey.	Sullivan	do	Do.
Potosi	do	Do.	Summit	Cambridge	Esmeralda.
Pride of the Mountain	Winemucca	Humboldt.	Sunrise	Silver Peak	Do.
Pride of Washoe	The Comstock	Storey.	Do.	Volcano	Do.
Prospect	do	Do.	Surpriser	The Comstock	Storey.
Prospectus	Esmeralda.	Storey.	Sutro	do	Do.
R. & W. Cross	The Comstock	Elko.	Swan	do	Do.
Rattler	Good Hope	Humboldt.	T. and C. Brooks	do	Do.
Do.	Mount Rose	Lincoln.	Table Mountain	do	Do.
Raymond & Ely	Ely	Esmeralda.	Tam O'Shanter	do	Do.
Real del Monte	Mount Rose	Humboldt.	Tarto	do	Do.
Red Deer	do	Do.	Teahatticup and Savage	Eldorado	Lincoln.
Red Hill	Mount Rose	Storey.	Tebama	The Comstock	Storey.
Reno	do	Esmeralda.	Thanksgiving	Esmeralda.	Esmeralda.
Richmond	The Comstock	Eureka.	Thornberg	The Comstock	Storey.
Do.	Columbus	Storey.	Thornton	do	Do.
Rock Island	Eureka	Do.	Tiger	Good Hope	Elko.
Rocky Bar	The Comstock	Do.	Tikup	Cherry Creek	White Pine.
Roddy	do	Humboldt.	Tilden	Columbus	Esmeralda.
Roman Capital	Silver Star	Storey.	Tipton	do	Do.
Royal	The Comstock	Humboldt.	Trey Consolidated	The Comstock	Storey.
R. R. Consolidated	Bradshaw	Storey.	Tucker	do	Do.
Ruby	The Comstock	Elko.	Tuscarora	Blue Jacket	Elko.
S. Belcher	Rock Creek	Storey.	Tucson	Tuscarora	Humboldt.
S. California	The Comstock	Do.	Twin	Mount Rose	Storey.
S. Chipman	do	Do.	Twin Peaks	The Comstock	Do.
S. Consolidated Virginia	do	Do.	Tybo	do	Nye.
S. Grosh	do	Do.	Tyro	The Comstock	Storey.
S. Star	do	Do.	Union Consolidated	do	Do.
S. St. Louis	do	Do.	Uranus	Mount Rose	Humboldt.
Sacramento	do	Do.	Utah	Esmeralda.	Esmeralda.
Sadie	do	Do.	do	The Comstock	Storey.
Sallie Hart	do	Do.	do	do	Do.
San Francisco	do	Do.	do	do	Do.
San Francisco Bell	Black Mountain	Esmeralda.	do	do	Do.
Santiago	The Comstock	Storey.	Utah first N. E. Ext.	do	Do.
Sarutoga	Lida Valley	Esmeralda.	Utah second N. E. Ext.	do	Do.
Do.	Columbia	Do.	Valiant	Vanderbilt	Esmeralda.
Savage	Montezuma	Do.	do	Silver Peak	Do.
Do.	Columbus	Do.	do	Columbus	Do.
Sawana	The Comstock	Storey.	do	Silver Peak	Do.
Schiller	Lida Valley	Esmeralda.	Venus	The Comstock	Storey.
Scorpion	Columbus	Do.	Vermont	do	Do.
Seg. Belcher	The Comstock	Storey.	Victor	Columbus	Esmeralda.
Seminole	do	Esmeralda.	do	Union	Nye.
Senator	The Comstock	Storey.	Victoria-Garber	The Comstock	Storey.
Sewell & Sheel	do	Do.	Virginia Standard	do	Do.
Shane	do	Do.	Vivian	do	Do.
Shanley	do	Do.	Volcano	do	Do.
Shawnut Consolidated	Montezuma	Esmeralda.	Vulcan	do	Do.
Sheridan	The Comstock	Storey.	Vulture	Black Mountain	Esmeralda.
Sherwood	do	Do.	W. Belcher	The Comstock	Storey.
Sierra	do	Do.	W. Crown Point	do	Do.
Sierra Nevada	do	Do.	W. Justice	do	Do.
Silverado	do	Do.	W. Star	do	Do.
Silver Bill	Bradshaw	Humboldt.	Walsh	Columbus	Esmeralda.
Silver Brick	Good Hope	Elko.	Wasatch	The Comstock	Storey.
Silver Central	The Comstock	Storey.	Wasatch Consolidated	do	Do.
Silver Champion	Central	Esmeralda.	Wasson	Silver Star	Esmeralda.
Silver Conner	do	Storey.	Waters	The Comstock	Storey.
Silver Eagle	do	Esmeralda.	Webber	do	Do.
Silver Hill	Silver Peak	Storey.	Wells Fargo	do	Do.
Silver Leaf	The Comstock	Do.	Western	do	Do.
Silver Lick	do	Eureka.	Western Soldier	Silver Peak	Esmeralda.
Silver Prize	Eureka	Elko.	Whale	Rock Creek	Elko.
Silver Star	Tuscarora	Do.	Wheeler	Wilson	Esmeralda.
Do.	do	Do.	White Deer	Mount Rose	Humboldt.
Silver Wave	The Comstock	Storey.	White Pine	Lodi	Nye.
Silver Wedge	Rebel Creek	Humboldt.	Wide West	Esmeralda	Esmeralda.
Sinder	Mount Rose	Do.	Wild Goose	Mount Rose	Humboldt.
Solid Silver	Good Hope	Do.	Williams	Cambridge	Esmeralda.
Do.	Congo	Humboldt.	Williamsburg	Eureka	Eureka.
South Buckeye	The Comstock	Storey.	Willis	Columbus	Esmeralda.
South Comstock	do	Do.	Wilson	Wilson	Do.
South End	do	Do.	Windsor	Columbus	Do.
South Jacket	do	Do.	Winnamuck	Esmeralda	Do.
South Lucerne	do	Do.	Woodville	The Comstock	Storey.
South Overman	do	Do.	Yankee	do	Do.
Southern Nevada	Columbus	Esmeralda.	Yellow Chief	Columbus	Esmeralda.
Spar	I. X. L.	Churchill.	Yellow Jacket	The Comstock	Storey.
Stafford	White Pine.	White Pine.	You and I	Good Hope	Elko.
			Young America	Esmeralda	Esmeralda.

NEW HAMPSHIRE.

Bedell	Ammonoosac	Grafton.	Shelburne	Shelburne	Coos.
Little May	do	Do.			

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

NEW MEXICO.

Name of claim.	District.	County.	Name of claim.	District.	County.
Commercial.....	Miembros.....	Grant.	Natal Queen.....	Miembros.....	Grant.
Cassette.....	Lone Mountain.....	Do.	Ohio.....	Pinos Altos.....	Do.
Langston.....	Pinos Altos.....	Do.	Pacific No. 2.....	Chloride Flat.....	Do.
Marshall Bonanza.....	Los Cerrillos.....	Santa Fe.	Providence.....	Silver Butte.....	Do.
Massachusetts.....	Pinos Altos.....	Grant.	San Pedro.....	Chloride Flat.....	Santa Fe.
McGregor.....	Miembros.....	Do.	Seventy-six, or Bremen.....	Sherman.....	Grant.
Mina Grande.....	Pinos Altos.....	Do.		Silver Flat.....	Do.

NORTH CAROLINA.

Conrad Hill.....	Near Lexington.....	Davidson.	Henry Hill.....	12 miles northwest of Carthage.	Moore.
Crowell.....	8 miles northeast of Albemarle.	Stanley.	King's Mountain.....	Near King's Mountain.	Cleveland.
Dunn's Mountain.....	3 miles southeast of Salisbury.	Rowan.	Mann.....	Griffith Township.....	Nash.
Ethan Allen.....	1 mile south of Thomasville.	Davidson.	McGinn.....	Capp's Hill.....	Mecklenburg.
Eureka.....	Thomasville.	Do.	Rudisill.....	Sixth.....	Do.
Fisher & Willis.....	6 miles south of Greensborough.	Guilford.	Silver Valley.....	Emmons Township.....	Davidson.

OREGON.

Buffalo.....	Granite.....	Grant.	Rye Valley.....	Rye Valley.....	Baker.
California.....	Silver Creek.....	Baker.	Valk.....	Pocahontas.....	Josephine.
Conner Creek.....	Conner Creek.....	Do.			Baker.
Gold Ridge.....	Burnt Pine.....	Do.			Do.
Monumental.....	Granite.....	Grant.			

O UTAH.

Abel Proctor.....	West Mountain.....	Salt Lake.	Buckland.....	Little Cottonwood.....	Salt Lake.
Abbey.....	Big Cottonwood.....	Do.	Buena Ventura.....	Beaver.	Beaver.
Accident.....	West Mountain.....	Do.	Buffalo.....	Little Cottonwood.....	Salt Lake.
Addie.....	Uintah.....	Summit.	Bulldeer.....	West Mountain.....	Do.
Agnes.....	West Mountain.....	Salt Lake.	Bullion.....	Tintic.....	Juab.
Aladdin.....	do.....	Do.	Billy Boy.....	West Mountain.....	Salt Lake.
Ahmeda.....	do.....	Do.	Burgess.....	do.....	Do.
Albino.....	do.....	Do.	Burning Moscow.....	do.....	Do.
Albion.....	Little Cottonwood.....	Do.	Burning Moscow Hill.....	Star.....	Beaver.
Alice.....	do.....	Do.	Butto.....	Big Cottonwood.....	Salt Lake.
Allegan.....	do.....	Do.	Captain Jack.....	Ophir.....	Tooele.
Allegheny.....	American Fork.....	Utah.	Caledonia.....	West Mountain.....	Salt Lake.
Alma.....	Mount Baldy.....	Salt Lake.	California.....	Ophir.....	Tooele.
Alpha.....	Little Cottonwood.....	Do.	Do.....	Harrisburg or Silver Reef.....	Washington.
Alturas.....	Big Cottonwood.....	Do.	Calumet.....	Rush Valley.....	Tooele.
Amazon.....	West Mountain.....	Do.	Carbonate.....	San Francisco.....	Beaver.
Amanda.....	Big Cottonwood.....	Do.	Do.....	Big Cottonwood.....	Salt Lake.
Amelia.....	West Mountain.....	Do.	Carrie Lucille.....	Pine Grove.....	Beaver.
American Flag.....	do.....	Do.	Carrie Steele.....	Camp Floyd.....	Tooele.
American Flag No. 2.....	Ophir.....	Tooele.	Carris.....	Tintic.....	Juab.
Antelope.....	Big Cottonwood.....	Salt Lake.	Casco.....	West Mountain.....	Salt Lake.
Do.....	Ophir.....	Tooele.	Catherine.....	Rush Valley.....	Tooele.
Apex.....	West Mountain.....	Salt Lake.	Cave.....	Bradshaw.....	Beaver.
Argent.....	Rush Valley.....	Tooele.	Do.....	West Mountain.....	Salt Lake.
Argonaut.....	West Mountain.....	Salt Lake.	Cedar.....	Ophir.....	Tooele.
Argyle.....	do.....	Do.	Centennial.....	No. 10.....	Juab.
Arrowpeen.....	do.....	Do.	Do.....	West Mountain.....	Salt Lake.
Arthur.....	Rush Valley.....	Tooele.	Central Pacific.....	Weber.....	Lehi.
Ashland.....	West Mountain.....	Salt Lake.	Corro Gordo Consolidated.....	San Francisco.....	Beaver.
Austin.....	Silver Lake.....	Utah.	Chaco.....	Rush Valley.....	Tooele.
Azuro Queen.....	Ophir.....	Tooele.	Champion.....	Precious.....	Beaver.
Badger.....	West Mountain.....	Salt Lake.	Chattanooga.....	Ohio.....	Pi Ute.
Baker.....	Big Cottonwood.....	Do.	Chicago.....	West Mountain.....	Salt Lake.
Balance.....	Little Cottonwood.....	Do.	Do.....	Ophir.....	Tooele.
Banner.....	Tintic.....	Do.	Chicago Tunnel.....	Little Cottonwood.....	Salt Lake.
Do.....	Uintah.....	Summit.	Chicago and Frisco Con.....	San Francisco.....	Beaver.
Barbee & Walker.....	Harrisburg or Silver Reef.....	Washington.	Chief.....	Big Cottonwood.....	Salt Lake.
Barstow.....	West Mountain.....	Salt Lake.	Chloride.....	Ophir.....	Tooele.
Bazouk.....	do.....	Do.	Chloride Chief.....	Harrisburg or Silver Reef.....	Washington.
Beecher.....	Ohio.....	Pi Ute.	Chloride Gem.....	Ophir.....	Tooele.
Belle of Monroe.....	do.....	Do.	Chubb.....	West Mountain.....	Salt Lake.
Belle of the Vale.....	West Mountain.....	Salt Lake.	Cincinnati.....	Little Cottonwood.....	Lehi.
Bemis.....	do.....	Do.	Cincinnati No. 1.....	do.....	Do.
Benton.....	West Mountain.....	Do.	Cincinnati No. 2.....	do.....	Do.
Bertrand.....	do.....	Do.	Cincinnati No. 3.....	do.....	Do.
Big Bonanza.....	Star.....	Do.	City Rock.....	do.....	Do.
Bismuth.....	Granite.....	Do.	Clara Davis.....	Uintah.....	Summit.
Black Bass.....	Big Cottonwood.....	Salt Lake.	Cliff.....	Mount Baldy.....	Pi Ute.
Black Dragon.....	Tintic.....	Do.	Clipper.....	Tooele.....	Tooele.
Black Metallic.....	West Mountain.....	Salt Lake.	Clyde.....	Mount Baldy.....	Pi Ute.
Black Warrior.....	Weber.....	Weber.	Colbath.....	Big Cottonwood.....	Salt Lake.
Blue Jay.....	West Mountain.....	Salt Lake.	Colorado.....	West Mountain.....	Do.
Robtail.....	do.....	Do.	Col. Sellers.....	do.....	Do.
Bolls & Collins.....	Little Cottonwood.....	Do.	Columbia.....	do.....	Do.
Bonanza.....	Tintic.....	Do.	Do.....	Ophir.....	Tooele.
Do.....	do.....	Do.	Columbus.....	Big Cottonwood.....	Salt Lake.
Bonham.....	Ophir.....	Do.	Comfort.....	West Mountain.....	Do.
Bonnie Blue Flag.....	West Mountain.....	Salt Lake.	Congress.....	Big Cottonwood.....	Do.
Boss.....	do.....	Do.	Constitution.....	West Mountain.....	Do.
Boulder.....	Bino Ledge.....	Summit.	Cooper.....	Big Cottonwood.....	Do.
Brain Lode.....	Little Cottonwood.....	Wasatch.	Copenhagen.....	West Mountain.....	Do.
Bright Point.....	Big Cottonwood.....	Salt Lake.	Copper Belt.....	Ohio.....	Pi Ute.
Brilliant.....	West Mountain.....	Do.	Coral Reef.....	Lincoln.....	Beaver.
British.....	Tintic.....	Do.	Cottonwood.....	Rush Valley.....	Tooele.
British Flag.....	West Mountain.....	Do.	Creedmore.....	Star.....	Beaver.
Brooklyn.....	Ophir.....	Do.	Cricket.....	Tintic.....	Juab.
Buckeye.....	Uintah.....	Summit.	Crismon-Mammoth.....	do.....	Do.
Do.....	Harrisburg or Silver Reef.....	Washington.	Crossus.....	Star.....	Beaver.
Buckhorn.....	Ophir.....	Tooele.	Do.....	West Mountain.....	Salt Lake.

PRECIOUS METALS.

DEEP MINES—Continued.

UTAH—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Croft.....	Tintic.....	Juab.	Grosbeck or Emperor.....	Big Cottonwood.....	Salt Lake.
Crown Point.....	Little Cottonwood.....	Salt Lake.	Hamlin.....	West Mountain.....	Do.
Crystal.....	Mount Baldy.....	Pi Ute.	Hannah.....	Rush Valley.....	Tooele.
Crystal Palace.....	Pine Grove.....	Beaver.	Happy-go-lucky.....	West Mountain.....	Salt Lake.
Cunningham No. 2.....	Little Cottonwood.....	Salt Lake.	Harriet No. 1.....	do.....	Do.
Dunn Pool.....	West Mountain.....	Do.	Harriet No. 2.....	do.....	Do.
Darlington.....	Little Cottonwood.....	Do.	Harriet No. 3.....	do.....	Do.
Davenport.....	do.....	Do.	Harriet No. 4.....	do.....	Do.
December group.....	Lincoln.....	Beaver.	Harrisburg.....	Star.....	Beaver.
Deer Trail.....	Mount Baldy.....	Pi Ute.	Hawkeye.....	Blue Ledge.....	Wasatch.
Defiance.....	Big Cottonwood.....	Salt Lake.	Hayes.....	Big Cottonwood.....	Salt Lake.
Dolmonte.....	Rosebud.....	Weber.	Henrietta.....	West Mountain.....	Do.
Dexter Consolidated.....	Little Cottonwood.....	Salt Lake.	Henry.....	Hot Springs.....	Do.
Deseret.....	Ophir.....	Tooele.	Henry M.....	West Mountain.....	Do.
Dial.....	West Mountain.....	Salt Lake.	Hinti.....	do.....	Do.
Dixie.....	Harrisburg or Silver Reef.....	Washington.	Hinwatha.....	Little Cottonwood.....	Do.
Dixon.....	West Mountain.....	Salt Lake.	Hickory.....	Star.....	Beaver.
Dixon No. 3.....	do.....	Do.	Hidden Treasure.....	Tintic.....	Juab.
Dodge.....	Harrisburg or Silver Reef.....	Washington.	do.....	Ophir.....	Tooele.
Dolly Varden.....	Big Cottonwood.....	Salt Lake.	Hidden Treasure E. Ext.....	do.....	Do.
Dora.....	West Mountain.....	Do.	Highland.....	West Mountain.....	Salt Lake.
Doughs.....	Ophir.....	Tooele.	Highland Boy.....	Little Cottonwood.....	Do.
Dufin.....	Harrisburg or Silver Reef.....	Washington.	do.....	West Mountain.....	Do.
Engle.....	Big Cottonwood.....	Salt Lake.	Highland Chief.....	Big Cottonwood.....	Do.
Engle Bird.....	West Mountain.....	Do.	do.....	Little Cottonwood.....	Do.
East Park M. Co.....	Blue Ledge.....	Wasatch.	Homestake.....	San Francisco.....	Ohio.
Eclipse.....	Big Cottonwood.....	Salt Lake.	do.....	Blue Ledge.....	West Mountain.....
Edison.....	West Mountain.....	Do.	Hooper.....	Star.....	Beaver.
Elephant.....	Star.....	Beaver.	Hoosier Boy.....	San Francisco.....	Pi Ute.
Do.....	West Mountain.....	Salt Lake.	Horn Silver.....	Detroit.....	Wasatch.
Elgin.....	Ophir.....	Tooele.	Howard.....	Little Cottonwood.....	Salt Lake.
Elkhorn.....	Camp Floyd.....	Do.	Howland.....	American Fork.....	Utah.
Ely.....	West Mountain.....	Salt Lake.	I. X. L.....	Huntington Grand.....	Juab.
Elmer Ray.....	Tintic.....	Juab.	do.....	West Mountain.....	Salt Lake.
Elvina.....	West Mountain.....	Salt Lake.	Illinois.....	Little Cottonwood.....	Do.
Emily.....	Little Cottonwood.....	Do.	Imperial.....	do.....	Do.
Emily Jane.....	West Mountain.....	Do.	do.....	Big Cottonwood.....	Do.
Emma.....	Harrisburg or Silver Reef.....	Washington.	Income.....	Star.....	Beaver.
Emma May.....	Little Cottonwood.....	Salt Lake.	Ingersoll.....	West Mountain.....	Salt Lake.
Empire.....	do.....	Do.	Ingomar.....	San Francisco.....	Beaver.
Emporia.....	Ophir.....	Tooele.	Irish-American.....	West Mountain.....	Salt Lake.
Enterprise.....	do.....	Do.	Island.....	Little Cottonwood.....	Do.
Equitable.....	Little Cottonwood.....	Salt Lake.	Ivanhoe.....	Star.....	Do.
Equitable No. 2.....	do.....	Do.	do.....	Ophir.....	Tooele.
Essex.....	West Mountain.....	Do.	I. X. L.....	West Mountain.....	Salt Lake.
Eureka.....	Tintic.....	Juab.	do.....	Ophir.....	Tooele.
Do.....	West Mountain.....	Salt Lake.	Jasper.....	Rush Valley.....	Do.
Evening Star.....	Ophir.....	Tooele.	Jeanette.....	Uintah.....	Summit.
Evergreen.....	Camp Floyd.....	Do.	Jennie.....	Ophir.....	Tooele.
Excelsior.....	West Mountain.....	Salt Lake.	Jersey Blue.....	West Mountain.....	Salt Lake.
Do.....	do.....	Do.	Jim Fisk, Jr.....	Ophir.....	Do.
Excelsior No. 2.....	American Fork.....	Utah.	Jolly Boy.....	Bradshaw.....	Beaver.
Experiment.....	West Mountain.....	Salt Lake.	Jones' Bonanza.....	Snake Creek.....	Wasatch.
Extension.....	do.....	Do.	Jordan.....	West Mountain.....	Salt Lake.
Fairview.....	Big Cottonwood.....	Do.	Josephine.....	Little Cottonwood.....	Do.
Do.....	Uintah.....	Summit.	Julian Lane.....	Tintic.....	Juab.
Fannie Bemis.....	West Mountain.....	Salt Lake.	Juno Rose.....	do.....	Do.
Fifthmore.....	Ohio.....	Pi Ute.	Jupiter.....	Big Cottonwood.....	Salt Lake.
First National.....	Rush Valley.....	Tooele.	Katherine.....	Rush Valley.....	Tooele.
Flagstaff.....	Little Cottonwood.....	Salt Lake.	Kearnsarge.....	Ophir.....	Do.
Flavilla.....	Ophir.....	Tooele.	Kempton.....	West Mountain.....	Beaver.
Flora.....	Star.....	Bearcat.	Kenosha.....	Little Cottonwood.....	Wasatch.
Fourth of July.....	Ophir.....	Tooele.	Killian.....	West Mountain.....	Salt Lake.
Fox.....	West Mountain.....	Salt Lake.	King of the West.....	Little Cottonwood.....	Do.
Frederick.....	Little Cottonwood.....	Do.	Kinner.....	Tintic.....	Do.
Freeland.....	do.....	Do.	Kinsey.....	do.....	Do.
Free Silver Mining Company.....	Blue Ledge.....	Wasatch.	Knickerbocker.....	West Mountain.....	Salt Lake.
Frisco.....	Big Cottonwood.....	Salt Lake.	Lady Aspinwall.....	Tintic.....	Do.
Do.....	West Mountain.....	Do.	Lady Emma.....	Little Cottonwood.....	Juab.
Frisco Consolidated.....	San Francisco.....	Beaver.	Lady Franklin.....	Weber.....	Do.
Fuller.....	Little Cottonwood.....	Salt Lake.	Lady of the Lake.....	Blue Ledge.....	Wasatch.
Galena.....	West Mountain.....	Do.	Last Chance.....	Little Cottonwood.....	Salt Lake.
Galena Extension.....	do.....	Do.	do.....	West Mountain.....	Do.
Gem.....	do.....	Do.	do.....	do.....	Summit.
General Connor.....	Rush Valley.....	Tooele.	do.....	Camp Floyd.....	Tooele.
General Garfield.....	Hot Springs.....	Do.	do.....	Harrisburg or Silver Reef.....	Washington.
General Scott.....	Uintah.....	Salt Lake.	do.....	West Mountain.....	Salt Lake.
General Washington.....	Little Cottonwood.....	Summit.	Last Chance No. 2.....	Little Cottonwood.....	Do.
Geneva.....	do.....	Salt Lake.	Lavinia.....	Hot Springs.....	Do.
Geneva Tunnel.....	West Mountain.....	Do.	Lawrence.....	West Mountain.....	Do.
George.....	do.....	Do.	Lead.....	do.....	Do.
Germany.....	West Mountain.....	Juab.	Leeds.....	Harrisburg or Silver Reef.....	Washington.
Giant Chief.....	Neho.....	Salt Lake.	Legal Tendor.....	Rush Valley.....	Tooele.
Gibson.....	West Mountain.....	Washington.	Lenora.....	do.....	Do.
Gladiator.....	Harrisburg or Silver Reef.....	Do.	Leontine.....	Little Cottonwood.....	Salt Lake.
Glencoe.....	Little Cottonwood.....	Salt Lake.	Levant.....	West Mountain.....	Do.
Golden Bell.....	Blue Ledge.....	Wasatch.	Liberty.....	do.....	Tooele.
Golden Crown.....	Rush Valley.....	Juab.	Lion.....	Rush Valley.....	Ophir.
Golden Era.....	West Mountain.....	Salt Lake.	do.....	Ophir.....	West Mountain.....
Golden Treasure.....	Star.....	Bearcat.	Little Cora.....	Big Cottonwood.....	Salt Lake.
Good Hope.....	Tintic.....	Tooele.	Little Giant.....	do.....	Do.
Grampian.....	Preuss.....	Beaver.	do.....	Blue Ledge.....	Wasatch.
Grand Cross.....	San Francisco.....	Do.	Little Mae.....	Uintah.....	Summit.
Granger.....	West Mountain.....	Salt Lake.	Little Mattie.....	West Mountain.....	Salt Lake.
Gray Eagle.....	Rush Valley.....	Tooele.	Live Pine.....	do.....	Do.
Do.....	Uintah.....	Millard.	Live Yankee.....	American Fork.....	Utah.
Great Basin.....	West Mountain.....	Salt Lake.	do.....	West Mountain.....	Salt Lake.
Great Eastern.....	Rush Valley.....	Do.	Lone Pine.....	Big Cottonwood.....	Do.
Greecian Bend.....	West Mountain.....	Do.	Lorenzo.....	West Mountain.....	Do.
Greely.....	do.....	Do.	Louise.....	Little Cottonwood.....	Do.
Green-eyed Monster.....	Mount Baldy.....	Pi Ute.	Lucky.....	Tintic.....	Juab.
Do.....	Ophir.....	Tooele.	Lucky Boy.....	Mount Baldy.....	Pi Ute.
Green Grove.....	West Mountain.....	Salt Lake.	Madelon Consolidated.....	Big Cottonwood.....	Salt Lake.
Grizzly.....	Little Cottonwood.....	Do.	Maggie.....	Harrisburg or Silver Reef.....	Washington.

APPENDIX III: DIRECTORY.

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DEEP MINES—Continued.

UTAH—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Magnolia	Ophir	Tooele.	Pittsburgh	American Fork	Utah.
Malogany	do	Do.	Plata de Mina	Mount Baldy	Pi Ute.
Makalola	San Francisco	Bever.	Pluto	do	Do.
Mammoth	Star	Do.	Poatello	Blue Ledge	Wasatch.
Do	Detroit	Millard.	Poorman	Ophir	Tooele.
Mammoth-Copperopolis	Tintic	Juab.	Prince of Wales	Big Cottonwood	Salt Lake.
Mammoth-Eureka	Harrisburg or Silver Reef	Washington.	Do	West Mountain	Do.
Manhattan	Little Cottonwood	Salt Lake.	Promontory	Bradshaw	Beaver.
Manitoba	West Mountain	Do.	Puterbaugh	Big Cottonwood	Salt Lake.
Maple Tree	Tintic	Salt Lake.	Putnum	Rush Valley	Tooele.
Marco	Little Cottonwood	Tooele.	Quaking Asp	West Mountain	Salt Lake.
Marien	Camp Floyd	Summit.	Quandary No. 2	Rush Valley	Tooele.
Do	Uintah	Utah.	Queen	West Mountain	Salt Lake.
Marsac	American Fork	Washington.	Queen of the Hill	Ophir	Tooele.
Mary Ellen	Harrisburg or Silver Reef	Salt Lake.	Queen of the West	American Fork	Utah.
Maud	Big Cottonwood	Tooele.	Do	San Francisco	Beaver.
Maxfield	Rush Valley	Salt Lake.	Rebel	Ophir	Tooele.
Maybell	West Mountain	Weber.	Red Cloud	Star	Beaver.
Mayflower	Rose Bud	Wasatch.	Red Lime	West Mountain	Salt Lake.
Do	Blue Ldg	Washington.	Red Pine	Ophir	Tooele.
McHenry	Little Cottonwood	Tooele.	Red Rover	Big Cottonwood	Salt Lake.
McKay	Harrisburg or Silver Reef	Do.	Reed & Benson	West Mountain	Do.
McNally	Rush Valley	Utah.	Reliable	Big Cottonwood	Do.
Merwin	West Mountain	Salt Lake.	Reno Consolidated	Bradshaw	Beaver.
Middle Belt	(do)	Tooele.	Revere	Camp Floyd	Tooele.
Midway	Champ Floyd	Utah.	Revolution	West Mountain	Salt Lake.
Milkmaid	Silver Lake	Salt Lake.	Richmond	Little Cottonwood	Do.
Mid City	West Mountain	Do.	Do	Lincoln	Beaver.
Miles	do	American Fork	Rising Sun	Big Cottonwood	Salt Lake.
Milwaukee	Tintic	Juab.	Do	Tintic	Juab.
Mineral Point	West Mountain	Salt Lake.	Rob Roy	Little Cottonwood	Salt Lake.
Miner's Delight	Ophir	Tooele.	Rockwell	Tooele	Tooele.
Miner's Dream	Star	Beaver.	Rollins	Ophir	Do.
Do	West Mountain	Salt Lake.	Roman Empire	Lincoln	Beaver.
Mohawk	Ohio	Pi Ute.	Rough and Ready	West Mountain	Salt Lake.
Monarch	Ophir	Tooele.	Do	Little Cottonwood	Do.
Monarch No. 2	do	Do.	Rothschild	Mount Baldy	Pi Ute.
Monarch No. 3	do	Beaver.	Rustler	Star	Beaver.
Monitor	Star	Summit.	Sacramento	American Fork	Salt Lake.
Do	Uintah	Tooele.	Do	West Mountain	Tooele.
Mono	Ophir	Juab.	Sacred	Ophir	Salt Lake.
Montana	Tintic	Salt Lake.	Saginaw	West Mountain	Do.
Monte del Rey	West Mountain	Pi Ute.	Sailor Jack	Big Cottonwood	Do.
Montezuma	Mount Baldy	Salt Lake.	Saint James	West Mountain	Do.
Montreal	Little Cottonwood	Do.	Saint John	Ophir	Do.
Mountaineer	West Mountain	Beaver.	Saint Louis	West Mountain	Tooele.
Mountain Gem	Star	Tooele.	Saint Mary's	Ophir	Salt Lake.
Mountain Maid	Ophir	Beaver.	Saint Mary's	West Mountain	Beaver.
Do	Bradsaw	Salt Lake.	Saint Mary's	West Mountain	Salt Lake.
Mountain Queen	West Mountain	Do.	Sampson	West Mountain	Do.
Mountain Savage	Neho	Tooele.	Do	Big Cottonwood	Summit.
Mountain Tiger	Ophir	Do.	Sanders	West Mountain	Salt Lake.
Mormon Chief	do	Do.	San Joaquin	Ophir	Tooele.
Mormon Nell	Camp Floyd	Salt Lake.	Saratoga	West Mountain	Salt Lake.
Morning Glory	West Mountain	Do.	Saturn	West Mountain	Do.
Morning Star	Tintic	Utah.	Savage	Star	Beaver.
Muscatine	Ohio	Salt Lake.	Do	Little Cottonwood	Salt Lake.
Nabob	Rush Valley	Do.	Do	West Mountain	Do.
Nast	Little Cottonwood	Utah.	Sedan	do	Do.
Nebraska	West Mountain	Salt Lake.	Shell	West Mountain	Juab.
Neptune	Silver Lake	Do.	Shoo Fly	Ophir	Salt Lake.
New Bedford	West Mountain	Tooele.	Shower	Tintic	Do.
New Compromise	Snake Creek	Do.	Silver Bell	American Fork	Utah.
New Forces Chief	American Fork	Do.	Silver Chief	Ophir	Tooele.
Clip-and-Tuck	West Mountain	Utah.	Silver Circle	Camp Floyd	Do.
North Pole	Bradsaw	Salt Lake.	Silver Crown	Harrisburg or Silver Reef	Washington.
North Side	Little Cottonwood	Do.	Silver Plat	American Fork	Utah.
North Star	San Francisco	Do.	Do	Harrisburg or Silver Reef	Washington.
Do	Tintic	Do.	Silver Hill	Prens	Beaver.
Northern Belt	Little Cottonwood	Do.	Do	West Mountain	Salt Lake.
Northern Chief	West Mountain	Do.	Silver King	Ohio	Pi Ute.
Northern Light	Rush Valley	Do.	Silver King No. 1	Rush Valley	Tooele.
Noyes	West Mountain	Do.	Silver King W. Ext	Big Cottonwood	Salt Lake.
No you don't	Ophir	Do.	Silver Mountain	West Mountain	Washington.
Do	West Mountain	Do.	Silver Plume	Harrisburg or Silver Reef	Tooele.
Old Stand By	Rush Valley	Tooele.	Silver Point	Rush Valley	Wheeler.
Old Telegraph	West Mountain	Salt Lake.	Silver Queen	Rose Bud	Salt Lake.
Olive Branch	do	Do.	Silver Reef	Little Cottonwood	Do.
Olympia	Neho	Juab.	Silver Shield	West Mountain	Juab.
Omaha	West Mountain	Salt Lake.	Do	Tintic	Salt Lake.
Ontario	do	Do.	Silver Spar	Little Cottonwood	Tooele.
Orphan	Uintah	Summit.	Siskiyou	Rush Valley	Beaver.
Ophir	American Fork	Utah.	Southport	San Francisco	Salt Lake.
Oregon	Big Cottonwood	Salt Lake.	South Side	Little Cottonwood	Tooele.
Orphan Boy	do	Do.	South Star	West Mountain	Do.
Osage	West Mountain	Do.	Spaniard	Tintic	Tooele.
Osceola	do	Do.	Sparrow Head	West Mountain	Salt Lake.
Do	Star	Beaver.	Stanley	Camp Floyd	Tooele.
Do	Big Cottonwood	Salt Lake.	Star of the West	West Mountain	Salt Lake.
Overland	Grantville	Tooele.	Steamboat	San Francisco	Beaver.
Do	Big Cottonwood	Salt Lake.	Stepmother	West Mountain	Salt Lake.
Oxford	West Mountain	Do.	Stewart	San Francisco	Tooele.
Park	Little Cottonwood	Do.	Stewart No. 2	West Mountain	Do.
Park City	Tintic	Juab.	Stewart Fractional No. 2	do	Do.
Parker	Uintah	Salt Lake.	Stormont	Harrisburg or Silver Leaf	Washington.
Pat	West Mountain	Do.	Story	West Mountain	Salt Lake.
Peabody	Little Cottonwood	Summit.	Summit	San Francisco	Beaver.
Phoenix	West Mountain	Do.	Do	West Mountain	Salt Lake.
Pinafore	do	Beaver.	Do	Ophir	Tooele.
Pinkham	Pine Grove	Washington.	Do	Tintic	Juab.
Pilon	Harrisburg or Silver Reef	Summit.	Sunbeam	do	Do.
Pioneer	Uintah	Wasatch.	Sunbeam No. 2	West Mountain	Utah.
	Snake Creek		Sunday	do	American Fork

PRECIOUS METALS.

DEEP MINES—Continued.

UTAH—Continued.

Name of claim.	District.	County.	Name of claim.	District.	County.
Sundown	West Mountain.....	Salt Lake.	Venice.....	West Mountain.....	Salt Lake.
Sunnyside	Ophir.....	Tooele.	Vespasian.....	do	Do.
Sunset	West Mountain.....	Salt Lake.	Veto.....	do	Do.
Surprise	do	Do.	Vicksburg.....	Star	Beaver.
Susan	Tintic	Juab.	Victor.....	West Mountain.....	Salt Lake.
Swansea	do	Do.	Victoria.....	Little Cottonwood	Do.
Switzerland	Uintal	Summit.	Virginia.....	do	Do.
Talco Consolidated	Rosebud	Weber.	Vulcan.....	Star	Beaver.
Taylor	Big Cottonwood	Salt Lake.	Do	West Mountain.....	Salt Lake.
Tecumseh	Harrisburg or Silver Reef	Washington.	Wade Hampton.....	Rush Valley	Tooele.
Telegraph	West Mountain.....	Salt Lake.	Walker.....	do	Do.
Telegraph first W. Ext.	do	Do.	Wandering Boy	Uintah	Summit.
Telegraph third W. Ext.	do	Do.	Wandering Jew	Big Cottonwood	Salt Lake.
Ten-Forty	do	Juab.	War Eagle.....	Ophir	Tooele.
Tesora	Tintic	Tooele.	Do	Uintah	Summit.
Thad, Stevens	Ophir	Salt Lake.	Warrior	American Fork	Utah.
Theresa	Big Cottonwood	Grantsville	Wasatch	Big Cottonwood	Salt Lake.
Third Term	do	Tooele.	Do	West Mountain	Do.
Thompson	Harrisburg or Silver Reef	Washington.	Wasatch King	Blue Ledge	Wasatch.
Thompson Consolidated	Rosebud	Weber.	Wasco	Silver Lake	Utah.
Thor	Big Cottonwood	Salt Lake.	Washington	Star	Beaver.
Thrash	West Mountain	Do.	Webster	West Mountain	Salt Lake.
Tieuaukee	do	Do.	Wedge	Ohio	Pi Ute.
Tilden	do	Do.	Wellington	West Mountain	Salt Lake.
Tiney	Uintah	Summit.	Wendigo	Big Cottonwood	Do.
Titus	Little Cottonwood	Salt Lake.	West Wind	Tintie	Juab.
Toquerville	Harrisburg or Silver Reef	Washington.	Whirlwind	Ophir	Tooele.
Toledo	Little Cottonwood	Salt Lake.	White Pine	Little Cottonwood	Salt Lake.
Torpedo	West Mountain	Do.	Wild Bill	American Fork	Utah.
Trace	Ophir	Tooele.	Wild Dutchman	Wild Rose	Summit.
Treasure	American Fork	Utah.	Wild Rose	Williams	Beaver.
Twombley	Tintic	Juab.	Williams	Williams & Lowell	Utah.
Tyler	Big Cottonwood	Salt Lake.	Winanuck	West Mountain	Wasatch.
Uncle Sam	Mount Baldy	Pi Ute.	Do	do	Salt Lake.
Undine	Tintic	Juab.	Woodside	Uintah	Wasatch.
Union Flag	West Mountain	Salt Lake.	Woodman	Tintie	Salt Lake.
Utah	Little Cottonwood	Do.	Yampa No. 1	West Mountain	Do.
• Do	West Mountain	Do.	Yampa No. 2	do	Do.
Do	Snake Creek	Wasatch.	Yellow Jacket	San Francisco	Beaver.
Utah No. 2	Little Cottonwood	Salt Lake.	York	West Mountain	Salt Lake.
Utah No. 3	do	Do.	Yosemite	do	Do.
Utah Consolidated	American Fork	Utah.	Do	do	Do.
Utah Queen	Ophir	Tooele.	Vula	Lincoln	Beaver.
V.....	Big Cottonwood	Salt Lake.	Zell	Ophir	Tooele.
Vallejo	Little Cottonwood	Do.			
Vanderbilt	Harrisburg or Silver Reef	Washington.			
Do	West Mountain	Salt Lake.			

VIRGINIA.

Culpeper	18 miles west of Fredericksburg 7 miles from Rappahannock	Culpeper.	Luce Bros	Coocho	Louisa.
Kelley		Fauquier.	Morrow	Cardsville	Buckingham.
			Rappahannock	Hartford	Stafford.

WASHINGTON.

Shaffer	Peshastor	Yakima.
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WYOMING.

American	California	Sweetwater.	Mary Ellen	California	Sweetwater.
Buckeye State	do	Do.	Miner's Delight	Miner's Delight	Do.
Cariboo	do	Do.	Seg. Miner's Delight	do	Do.
Cariso	Shoshone	Do.	Sydney Johnson	Shoshone	Do.
Hartley	Miner's Delight	Do.	Victoria	California	Do.
Manchester	California	Do.	Yellow Jacket	Shoshone	Do.

AMALGAMATING MILLS.

ARIZONA.

Name of mill.	District.	County.	Name of mill.	District.	County.
Arivaca	Arivaca	Pima.	Isabella	Globe	Pinal.
Bradshaw Basin	Pine Grove	Yavapai.	McCracken	Owens	Mohave.
Central Arizona	Town of Vulture	Maricopa.	Do	do	Do.
Champion	Globe	Do.	Mineral Park	Hualapai	Do.
Contention	Tombstone	Pima.	Penobdy	Owens	Do.
Corbin	do	Do.	Peck	Peek	Yavapai.
Derré & Townsend	Arivaca	Do.	Signal	Owens	Mohave.
Gird	Tombstone	Do.	Silver King	Pioneer	Pinal.
Golden Era	Cherry Creek	Yavapai.	Stonewall Jackson	Globe	Maricopa.
Grounds & Welton	Hualapai	Mohave.	Tiger	Tiger	Yavapai.
Haupten	Cedar Valley	Do.	Tip Top	do	Do.
Do	do	Do.	Windsor	Cherry Creek	Do.

CALIFORNIA.

Afterthought			Black Bear	South Fork Salmon	Siskiyou.
Alabama	Jamestown	Shasta.	Bodie	Bodie	Mono.
Amelia	Washington	Tuolumne.	Brown Monitor	Russ	Inyo.
Arizona Northern Company	Hualapai	Calaveras.	Brush Hill	Hayden Hill	Mariposa.
Bidwell	Clark	Mohave.	San Bernardino.	Julian	San Diego.

APPENDIX III: DIRECTORY.

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AMALGAMATING MILLS—Continued.

CALIFORNIA—Continued.

Name of mill.	District.	County.	Name of mill.	District.	County.
Bullion	Mariposa Estate	Mariposa.	McNulty	Near Placerville	El Dorado.
Bulwer-Standard	Bodie	Mono.	Mellones	Robinson's Ferry	Calaveras.
Chaparral	Near Kelsey	El Dorado.	Miners	Bodie	Mono.
Chicago		Shasta.	Miniette Belle	Lookout	Inyo.
Comanche	Sutter Creek	Mono.	Monitor Consolidated	Indian Valley	Plumas.
Consolidated Amador	Confidence	Amador.	Monte Christo	Jackson	Amador.
Confidence	Pittsburgh	Tuolumne.	Monte Richard	do	Do.
Copper City	Blind Spring	Shasta.	Murcho	Nevada City	Nevada.
Diana	Near Angel's	Mono.	Nevada City	do	Do.
Dolan & Cogswell	Volcano	Calaveras.	New Albany	Summerville	Tuolumne.
Downs		Amador.	Noonday	Bodie	Mono.
Empire	Sutter Creek	Amador.	Oncida	Jackson	Amador.
Fugus	Volcano	Do.	Original Amador	Amador City	Do.
Genesee	Genesee Valley	Placer.	Panamint	Panamint	Inyo.
Gold Stripe	Indian Valley	Plumas.	Peabody	Aurora	San Diego.
Golden Charlott	Banner	San Diego.	Picacho	Picacho	Do.
Golden Eagle	Hayden Hill	Lassen.	Placerville	Placerville	Eldorado.
Golden Gate	Volcano	Amador.	Plumas-Eureka	Quartz Township	Plumas.
Green Mountain	Indian Valley	Plumas.	Plumas-National	Indian Valley	Do.
Gwin	Mokelumne Hill	Calaveras.	Pool	Hornitos	Mariposa.
Harris	Independence	Do.	Providence	Nevada City	Nevada.
Do	Jamestown	Tuolumne.	Rising Sun	Colfax	Placer.
Hite	Mariposa Estate	Mariposa.	Rosero & Knight	Hayden Hill	Lassen.
Homer	Homer	Mono.	Savercroft	Sonorae	Plumas.
Hubbard	Banner	San Diego.	Soulby	Soulbyville	Tuolumne.
Idaho	Grass Valley	Nevada.	Spaulding	Bodie	Mono.
Ivanpan	Clark	San Bernardino.	Springfield	Springfield	El Dorado.
Johnson	Quartz Valley	Siskiyou.	Standard	Bodie	Mono.
Kearsarge	Kearsarge	Inyo.	Syndicate	do	Do.
Ketyl	Riverside	Tuolumne.	Tower	Indian	Do.
Keystone Consolidated	Amador City	Amador.	True Gold	Placerville	Eldorado.
Klamath	Sawyer's Bar	Siskiyou.	Washington	Hornitos	Mariposa.
Louisiana	Cherokee	Tuolumne.	Whisky Slide	Mokelumne Hill	Calaveras.
Lyon Gravel	Placerville	El Dorado.	Yosemite	Hornitos	Mariposa.
Mad Ox	Whisky Creek	Shasta.	Yuma	Cerro Mocha	San Diego.
			Zelle	Jackson	Amador.

COLORADO.

Adelia	Hardscrabble	Custer.	Kansas	Nevada	Gilpin.
Albro	Morris	Clear Creek.	Kimber & Fullerton	Enterprise	Do.
Black Hawk	Gregory	Gilpin.	Little Annie	Summit	Rio Grande.
Bostwick	Enterprise	Do.	Neikirk	Gold Hill	Boulder.
Boulder	Salina	Boulder.	New York	Gregory	Gilpin.
Caribou	Grand Island	Do.	New York and Colorado	do	Do.
Cashier	Gregory	Gilpin.	Niwot	Ward	Boulder.
Chicago and Colorado	Ward	Boulder.	Pioneer	Upper Union	Clear Creek.
Clayton	Nevada	Gilpin.	Polar Star	Enterprise	Gilpin.
Clear Creek	Griffith	Clear Creek.	Randolph	Gregory	Do.
Colorado Prince	California	Lake.	Sinsenfeder	Enterprise	Do.
Elyria	Avalanche	Summit.	Sullivan & Wheeler	do	Do.
Empire	Enterprise	Gilpin.	Trojan	Idaho	Clear Creek.
Farwell	Griffith	Clear Creek.	United Gregory	Gregory	Gilpin.
Golden Age	Central	Boulder.	Upper Kimber & Fullerton	Enterprise	Do.
Humphreys	Enterprise	Gilpin.	Watorman	Eureka	Do.
John Jay		Boulder.	Whitecomb	Nevada	Do.

DAKOTA.

A. P. Moore	Whitewood	Lawrence.	Golden Star	Whitewood	Lawrence.
Caledonia	do	Do.	Golden Terra (50-stamp)	do	Do.
Central	do	Do.	Golden Terra (60-stamp)	do	Do.
Champion	do	Do.	Great Eastern	Whitewood	Do.
Deadwood	do	Do.	Hidden Treasure	do	Do.
Dr. Thompson	do	Do.	Highland	do	Do.
Elliot	do	Do.	Homestake	do	Do.
Fairview	do	Do.	McLaughlin & Cassell	do	Do.
Father de Smet	Lost Placer	Do.	Milwaukee and Black Hills	do	Do.
Foot Hildebrandt	Whitewood	Do.	Racine	do	Do.
Florence	Bear Butte	Do.	Union	do	Do.

GEORGIA.

Barlow	Twelfth	Lumpkin.	J. B. Smith	Bussey	Wilkes.
Bast	do	Do.	Jennings	Republican	McDuffie.
Blako	Fourth	White.	Kendall	One hundred and seventy-eighth	Wilkes.
Cheynegowah	Thirteenth	Cherokee.	Kendrick	Twelfth	Cobb.
Cleveland	Twelfth	Lumpkin.	Lockhart	Sinniston	Lumpkin.
Dahlomea	do	Do.	Morgan	Third	Oglethorpe.
Findley (steam)	do	Do.	Nacochee.	do	White.
Findley (water)	do	Do.	Parks	Goshen	Cherokee.
Georgia	Ninth	Hall.	Sales	Twelfth	Lincoln.
Griscom	Twelfth	Lumpkin.	Singleton	Stony Ridge	Lumpkin.
Harris	Ninth	Hall.	Strickland	Third	Wilkes.
Hayden	do	Do.			Forsyth.
Holland	Eighth	Haralson.			
Ivy	Twelfth	Lumpkin.			

IDAHO.

Bonaparte Consolidated (old)	Bonaparte	Alturas.	Davis	Middle Boise	Alturas.
Bonaparte Consolidated (new)	do	Do.	Elkhorn	Elkhorn	Boise.
Buffalo	Middle Boise	Do.	Elmira	Banner	Do.
Buffalo and Atlanta	do	Do.	Elmore	Rocky Bar	Alturas.
Cosmos or Silver Cord	Carson	Owyhee.	do	Carson	Owyhee.

PRECIOUS METALS.

AMALGAMATING MILLS—Continued.

IDAHO—Continued.

Name of mill	District	County	Name of mill	District	County
Gen. Custer.....	Yankee Fork.....	Lemhi.	New York or Golden Chariot	Carson.....	Owyhee.
Gold Hill.....	Granite.....	Boise.	Plowman.....	Shaw's Mountain.....	Boise.
Greenback.....	Middle Boise.....	Alturas.	Reeser.....	Rocky Bar.....	Alturas.
Iowa.....	Granite.....	Boise.	Rescue.....	Warren's.....	Idaho.
Joe Daly.....	Queen's River.....	Alturas.	Scales & Wagner.....	Carson.....	Owyhee.
Jones & Adams.....	Wagontown.....	Owyhee.	South Chariot.....	do.....	Do.
King.....	Mammoth.....	Boise.	Sub Rosa.....	Gambrius.....	Boise.
Leonard.....	Carson.....	Owyhee.	Tremont.....	Wagontown.....	Owyhee.
Mammoth.....	Mammoth.....	Boise.	Victor.....	Red Warrior.....	Alturas.
Mattingly.....	Middle Boise.....	Alturas.	Wide West.....	do.....	Do.
Monarch.....	do.....	Do.			

MAINE.

Sullivan.....	Sullivan.....	Hancock.....
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MONTANA.

Algonquin.....	Flint Creek.....	Deer Lodge.	Hope.....	Flint Creek.....	Deer Lodge.
Alice.....	Summit Valley.....	Do.	Hursts & Olds.....	Hot Springs.....	Madison.
Belmont.....	Silver Creek.....	Lewis and Clarke.	Iron Rod.....	Silver Star.....	Do.
Bonanza Chief.....	Near Helena.....	Jefferson.	Ceating.....	Cedar Plain.....	Jefferson.
Burlington.....	Summit Valley.....	Deer Lodge.	Lexington.....	Summit Valley.....	Deer Lodge.
Carhart.....	Bannock.....	Beaver Head.	Mallory.....	Mineral Hill.....	Madison.
Clipper.....	Summit Valley.....	Deer Lodge.	McLeod, Conly & Murphy.....	McClellan Gulch.....	Deer Lodge.
Dexter.....	do.....	Do.	Mount Pleasant.....	Stemple.....	Lewis and Clarke.
Drummond.....	Stemple.....	Lewis and Clarke.	Penobscot and Snowdrift.....	Silver Creek.....	Deer Lodge.
Elkhorn.....	Bald Mountain.....	Beaver Head.	Sheenon's.....	Bannock.....	Beaver Head.
Grove Gulch.....	Summit Valley.....	Deer Lodge.	Silver Bow.....	Summit Valley.....	Deer Lodge.
Heineman.....	Silver Star.....	Madison.	Thornton.....	do.....	Do.
Hollock.....	Elkhorn.....	Jefferson.	Whippoorwill.....	Stemple.....	Lewis and Clarke.

NEVADA.

Alexander.....	Union.....	Nye.	Manhattan.....	Reese River.....	Lander.
Bacon.....	The Comstock.....	Lyon.	Mariposa.....	The Comstock.....	Storey.
Blue Jacket.....	Blue Jacket.....	Elko.	Martin White.....	Ward.....	White Pine.
Boston.....	The Comstock.....	Lyon.	Meadow Valley.....	Ely.....	Lincoln.
Brunswick.....	do.....	Ormsby.	Morey.....	Morey.....	Nye.
Bullion of Paradise.....	Mount Rose.....	Humboldt.	Morgan.....	The Comstock.....	Ormsby.
California.....	The Comstock.....	Storey.	Nevada.....	do.....	Storey.
Cambridge.....	Cambridge.....	Elko.	Northern Belle No. 1.....	Columbus.....	Esmeralda.
Central.....	Pine Grove.....	Do.	Northern Belle No. 2.....	do.....	Do.
Columbia Consolidated.....	Columbia.....	Elko.	Occidental.....	The Comstock.....	Lyon.
Consolidated Virginia.....	The Comstock.....	Do.	Omega.....	do.....	Storey.
Dayton.....	do.....	Elko.	Pacific.....	do.....	Elko.
Dolores.....	Pine Grove.....	Esmeralda.	Paradise Valley.....	Mount Rose.....	Humboldt.
Douglass.....	The Comstock.....	Lyon.	Pioneer.....	Pine Grove.....	Esmeralda.
Eberhardt and Aurora.....	White Pine.....	White Pine.	Rhode Island.....	The Comstock.....	Storey.
Empire State.....	The Comstock.....	Storey.	Santiago.....	do.....	Ormsby.
Endowment.....	Black Mountain.....	Elko.	Southwestern.....	El Dorado.....	Lincoln.
Eureka.....	The Comstock.....	Lyon.	Star.....	Cherry Creek.....	White Pine.
Fairmount.....	Winnemucca.....	Humboldt.	Starr & Grove.....	Lewis.....	Lander.
Foundry.....	Esmeralda.....	Esmeralda.	Trench.....	The Comstock.....	Lyon.
Gen. Thomas.....	Columbus.....	Do.	Tybo.....	Tybo.....	Nye.
Grand Prize.....	Tuscarora.....	Elko.	Valley.....	Fahranagat.....	Lincoln.
Humboldt.....	Winnemucca.....	Humboldt.	Vivian.....	The Comstock.....	Ormsby.
Independence-Navajo.....	Tuscarora.....	Elko.	Wenban.....	Cortez.....	Eureka.
Indian Queen.....	Oneota.....	Esmeralda.	Wheeler.....	Wilson.....	Esmeralda.
Lancaster.....	Tuscarora.....	Elko.	Wilson.....	do.....	Do.
Lang Syne.....	Sierra.....	Humboldt.	Winfield.....	The Comstock.....	Storey.
Leopard.....	Cornucopia.....	Elko.	Woodworth.....	do.....	Lyon.
Lodi.....	Silver Peak.....	Esmeralda.			

NEW MEXICO.

Bremen.....	Silver Flat.....	Grant.	Miembres.....	Miembres.....	Grant.
Cosette.....	do.....	Do.	Weeks & Fresh.....	Hillsborough.....	Dofia Aña.

NORTH CAROLINA.

Fisher & Willis Hill.....		Guilford.	McGinn.....	Capp's Hill.....	Mecklenburg.
Huston.....		Moore.	New York and North Carolina.	Near Charlotte.....	Do.
King's Mountain.....		Gaston.	Rudisill.....	Sixth Congressional.....	Do.

OREGON.

Conner Creek.....	Conner Creek.....	Baker.	Rye Valley.....	Rye Valley.....	Baker.
Gold Ridge.....	Burnt River.....	Do.	Virtue.....	Near Baker City.....	Do.
Monumental.....	Granite.....	Grant.	Wood & Esterbrook.....	Burnt River.....	Do.

SOUTH CAROLINA.

Hale.....	Sixth Judicial.....	Lancaster.
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APPENDIX III: DIRECTORY.

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AMALGAMATING MILLS—Continued.

UTAH.

Name of mill.	District.	County.	Name of mill.	District.	County.
Baltic.....	Rush Valley.....	Tooele.	Mammoth-Copperopolis.....	Tintic.....	Juab.
Barbee & Walker.....	Harrisburg or Silver Reef.....	Washington.	Marsac.....	Uintah.....	Summit.
Carrie Steele.....	Camp Floyd.....	Tooele.	McHenry.....	Park City.....	
Christy.....	Harrisburg or Silver Reef.....	Washington.	Milford.....	Milford.....	
Crismon-Mammoth.....	Tintic.....	Juab.	North Star.....	North Star.....	
Durant.....			Ontario.....	Ontario.....	
Ely.....	Tintic.....	Salt Lake.	Stewart No. 1.....	West Mountain.....	Beaver.
Jordan (10 stamp).....	West Mountain.....	Do.	Stewart No. 2.....	do.....	Summit.
Jordan (60 stamp).....	do.....	Washington.	Stormont.....	Harrisburg or Silver Reef.....	Salt Lake.
Leeds.....	Harrisburg or Silver Reef.....		Tintic.....	Tintic.....	Do.

VIRGINIA.

Culpeper.....		Culpeper.	Morrow.....	Cardsville.....	Buckingham.
Kelly.....	Coochoo.....	Fauquier.	Rappahannock.....	Hartwood.....	Stafford.

WYOMING.

American.....	California.....	Sweetwater.	Keystone.....	Douglas.....	Carbon.
Buckeye State.....	do.....	Do.	Miner's Delight.....	Miner's Delight.....	Sweetwater.
Caribou.....	do.....	Do.	N. L. Turner.....	California.....	Do.
Hartley.....	Miner's Delight.....	Do.	Sig. Miner's Delight.....	Miner's Delight.....	Do.
Huff & Ansell.....	California.....	Do.	Victor.....	California.....	Do.

ARRASTRAS.

ALABAMA.

Name of mill.	District.	County.	Name of mill.	District.	County.
Houston & Pinson.....	Thirty-third.....	Cloburne.			

ARIZONA.

Gross & Smith.....	Hualapai.....	Mohave.	South Oro Belle.....	Tiger.....	Xavapai.
Johnson.....	Weaver.....	Xavapai.	Thunderbolt.....	Walker.....	Do.
Nash.....		Do.			

CALIFORNIA.

Champion.....	Independence.....	Calaveras.	Loper, Keyes & Co.....	Angel's.....	Calaveras.
Treano Enterprise.....	Potter Ridge.....	Fresno.	Potter.....	do.....	Do.
Italian.....		Plumas.			

COLORADO.

George Bachelder.....	Colorado.....	Boulder.	Rock Point.....	Iron Springs.....	Ouray.
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IDAHO.

Estes.....	Yankee Fork.....	Lemhi.	Scales & Wagner.....	Carson.....	Owyhee.
Iowa.....	Granite.....	Boise.	Trask.....	do.....	Do.
Norton's.....	Yankee Fork.....	Lemhi.			

MONTANA.

Black Tail.....	Black Tail.....	Deer Lodge.	H. Siegchrist.....	Silver Star.....	Madison.
Glen Egbert.....		Do.	Schafer.....	Oro Fino Gulch.....	Lewis and Clarke.

NEVADA.

Chandler.....	Gold Hill.....	Storey.	Willis.....		Esmeralda.
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NEW MEXICO.

Skillicorn.....	Pinos Altos.....	Grant.			
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NORTH CAROLINA.

Mann.....	Griffith Township.....	Nash.....			
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PRECIOUS METALS.

ARRASTRAS—Continued.

OREGON.

Name of mill.	District.	County.	Name of mill.	District.	County.
Beagle McCord.....	Granite Chicken Creek.....	Grant. Baker.	Sugar Pine.....	Yank.....	Josephine.

WASHINGTON.

Cooper & Lockwood	Peshastor	Yakima	Wiler & Miller	Peshastor	Yakima.
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SMELTING WORKS.

ARIZONA.

Name of works.	District.	County.	Name of works.	District.	County.
Agua Fria	Big Bug	Yavapai.

CALIFORNIA.

Defiance.....	Coso.....	Inyo.	Union Consolidated.....	Cerro Gordo	Inyo.
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COLORADO.

American.....	California.....	Lake.	Little Chief.....	California.....	Lake.
Boston and Colorado	Argo.....	Arapahoe.	Lizzie.....	do.....	Do.
Boyd.....	.....	Boulder.	Lincoln City	Avanalanche	Summit.
California.....	California.....	Lake.	Malta	California	Lake.
Crooks.....	Galena.....	Hinsdale.	Moroa	Golden City	Jefferson.
Cummings & Elm	California.....	Lake.	Norfolk and Ouray	Ouray	Hinsdale.
Duquesne.....	Sacramento	Park.	Ocean Wave	Uncompahgre	Lake.
Elgin.....	California.....	Lake.	Ohio and Missouri	Lake	California.
French.....	Golden City	Jefferson.	Pueblo	Califonia	Pueblo.
Gage, Hageman & Co.....	California.....	Lake.	Raymond, Sherman & McKinley	San Juan and New York	Lake.
Grant.....	do.....	Do.	San Juan and New York	Utah	Animas
Golden.....	Golden City	Jefferson.	Windham	Windham	California
Harrison.....	California.....	Lake.	San Juan.
La Plata	do	Do.	Lake.

DAKOTA.

El Refugio.....	Bear Butte	Lawrence.
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IDAHO.

Bay Horse	Lemhi.
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MONTANA.

Alta Montana	Colorado.....	Jefferson.	Colorado and Montana.....	Summit Valley	Deer Lodge.
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NEBRASKA.

Omaha.....	Omaha	Donglass.
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NEVADA.

Eureka Consolidated	Eureka	Eureka.	Richmond	Eureka	Eureka.
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UTAH.

Chicago.....	Slagtown	Tooele.	Old Telegraph	West Mountain	Salt Lake.
Engstaff.....	Salt Lake.	Park City	Uintah	Summit.
Frisco	San Francisco	Beaver.	Riverside	Star	Beaver.
Germany.....	.....	Salt Lake.	Shauntie .....	.....	Do.
Great Basin	Slagtown	Tooele.	Troy	do	Do.
Horn-Silver	San Francisco	Beaver.	Warm Springs	Slagtown	Salt Lake.
Mingo .....	.....	Salt Lake.	Waterman .....	.....	Tooele.
Morgan	Do.	Williams & Latey	Star	Beaver.
Old Sultana	American Fork	Utah.

APPENDIX III: DIRECTORY.

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PLACER MINES.

ARIZONA.

Name of mine.	District.	County.	Name of mine.	District.	County.
Boston.....	Greenlee Gold Mountain....	Apache.	Jackson	8 miles northwest of Prescott	Yavapai.

CALIFORNIA.

A. B. C.....	Callahan's Ranch	Siskiyou.	La Grange.....	La Grange	Stanislaus.
Alpha	Nevada.....	Nevada.	Lennet Brothers	Oak Bar	Siskiyou.
American.....	Portwine	Sierra.	Lewiston	Junction City	Trinity.
Do.....	Sebastopol	Nevada.	Liberty Consolidated	Little York	Nevada.
Bald Mountain.....	Forest City	Sierra.	Lincoln Hart & Henry	Poker Flat	Siskiyou.
Ballarat	North Bloomfield	Nevada.	Little Grizzly	Cherokee Flat	Sierra.
Banghart	Whisky Creek	Shasta.	Little Keneshaw	Butte	Butte.
Barker	Dutch Flat	Placer.	Little York	Little York	Nevada.
Barton & Co.....	Oak Bar	Siskiyou.	Lowden & Bates	Lewiston	Trinity.
Bay City.....	Indian Creek	Do.	Laon Gravel	Placerville	El Dorado.
Berger	Cañon Creek	Trinity.	Mables Bench	Wenner	Trinity.
Big Bend Klamath.....	Scott Bar	Siskiyou.	McAkever & Buck	Washington	Nevada.
Black Hawk	Near Quincy	Plumas.	Magalia	Magalia	Butte.
Blakely	Placerville	El Dorado.	Mammoth	Mokelumne Hill	Calaveras.
Blooming Ditch Company.....	Brush Creek	Butte.	Do	Red Hill	Trinity.
Blue Banks.....	Wolsey's Flat	Nevada.	Mammoth Bar	Auburn	Placer.
Blue Gravel	Sucker Flat	Yuba.	Manzanita	Nevada	Nevada.
Blue Point	Smartsville	Do.	Martin, Andrews & Co.	Scott Bar	Siskiyou.
Blue Tent	Sucker Flat	Nevada.	Marfield & Co.	do	Do.
Bonanza	Howland Flat	Sierra.	Met'Archy's Diggings	Columbia Hill	Nevada.
Do.....	Mokelumne Hill	Calaveras.	McElroy	Angel's	Calaveras.
Borlands	Scott Bar	Placer.	McKenna	Junction City	Trinity.
Boston	Wolsey's Flat	Nevada.	Messner & Co.	Callahan's Ranch	Siskiyou.
Brown Bear	Lewiston	Trinity.	Michigan Bar	Scott Bar	Do.
Buckeye	Buckeye	Do.	Milton	French Corral	Nevada.
Bunker Hill	18 miles S. W. Happy Camp	Del Norte.	Miocene	Oroville	Butte.
Canon Creek	Gold Run	Placer.	Moflat & Barnes	Yulcite	Calaveras.
Car	Poker Flat	Siskiyou.	Morning Star	Iowa Hill	Placer.
Carrol	McAdams Creek	Placer.	Montezuma	Lowiston	Trinity.
Cedar Creek	Dutch Flat	Siskiyou.	Morrison Gulch	Morris Ravine	Do.
Centennial	Virginia Bar	Virginia.	Mott & Co.	Moutain View	Butte.
Center Bar	Hayfork	Siskiyou.	Mountain View	Scott Bar	Siskiyou.
Center Placer	Trinity Center	Trinity.	Muc-a-muc	Happy Camp	Del Norte.
Chamberlain	Lewiston	Do.	Murphy	Scott Bar	Siskiyou.
Chapman & Fisher	Arkansas Bar	Do.	Neglo	Greenwood	El Dorado.
Chas. Tourot	Hayfork	Do.	Nash	Trinity Centre	Trinity.
Chime Creek	Happy Camp	Del Norte.	New Castle	You Bat	Do.
Christmas Hill	Claremont Hill	Nevada.	New Castle	New Castle	Calaveras.
Claremont Peak	Trinity Center	Plumas.	New River	Cedar Flat	Yuba.
Coil	Pine Grove	Trinity.	New York	Sonora	Plumas.
Consolidated Amador	Moonlight Mountain	Amador.	North Bloomfield	McAdams Creek	Siskiyou.
Cook's Cañon	Gibsonville	Plumas.	North Fork	Magalia	Butte.
Cox & Gourley	Indian Creek	Sierra.	Oak Grove	Orion	Placer.
Coyote Gulch	Siskiyou.	Sierra.	Old Channel	Iowa Hill	Butte.
Culver & Co.....	Gold Lake	Trinity.	Orion	Oroville	Sierra.
Cunningham	Lewiston	Placer.	Greville	Humbug	Yuba.
Craunge	Yankee Jim's	Placer.	Pacific	Bath	Placer.
Dardanelles	Forest Hill	Do.	Pactolus	Oleoth	Amador.
Davis	Sonora	Tuolumne.	Paragon	Cox Bar	Trinity.
Davis & Wilson	Gold Hill	Sierra.	Patterson	Yreka	Siskiyou.
Deep Blue	Angel's	Calaveras.	Pellat & Traitt	Mokelumne Hill	Calaveras.
Del Norte	Happy Camp	Do.	Penobscot	Lowiston	Trinity.
Demmerbrinks	North Bloomfield	Trinity.	Philip	Quartz Valley	Siskiyou.
Derbeo	Sonora	Nevada.	Pioneer	Quincy	Plumas.
Dixwell	Igo	Tuolumne.	Plumas	Mayfork	Trinity.
Dry Creek	McAdams Creek	Shasta.	Poker Bar	do	Do.
Duncans Cameron	Mokelumne Hill	Siskiyou.	Point Bar	Dutch Flat	Placer.
Duryea	do	Do.	Polar Star	Scott Bar	Siskiyou.
Eureka	Red Hill	Trinity.	Prenkol	do	Do.
Evans & Bartlett	Smartsville	Yuba.	Raum's	Magalia	Butte.
Excelsior	Scind Valley	Siskiyou.	Red Hill	Sweetland Creek	Nevada.
Fort Goff Creek	Dutch Flat	Placer.	Reich	Nevada	Do.
Franklin	French Corral	Do.	Rook Creek	Trinity.	Trinity.
French Corral	Hayfork	Trinity.	Rule Brothers	Placer.	Do.
Fry Brothers	Magalia	Butte.	Sacks	Novada.	Do.
Fulton & Co.....	Weaver	Trinity.	Sailor Flat	Shasta.	Do.
Garden Gulch	Grass Valley	Nevada.	Saw Mill Flat	Blue Tent	Trinity.
Godfrey	Near Groveland	Tuolumne.	Segalia	Altar	Placer.
Golden Rock	Gold Run	Placer.	Shady Glen	Hayfork	Trinity.
Gold Run	Perkins Bar	Trinity.	Shanghai	Perkins' Bar	Do.
Good Friday	do	Do.	Sheridan	Trinity Center	Do.
Gribbles	Junction City	Do.	Shoe Fly	Cherokee Flat	Butte.
Hager & Haas	Scott Bar	Siskiyou.	Sinchair	McAdams Creek	Sierra.
Hancock	Happy Camp	Do.	Siwash	Big Bar	Sierra.
Happy Camp	Mokelumne Hill	Calaveras.	Skattery	Junction City	Trinity.
Happy Valley	Groveland	Tuolumne.	Smartville	Snicker Flat	Trinity.
Haraden	McAdams Creek	Siskiyou.	Smith's Flat	Douglas	Placer.
Harusiferable	Trinity.	Trinity.	Sols & Co.	Oak Bar	Siskiyou.
Harvey Brothers	Weaver	Placer.	Southern Cross	Dutch Flat	Placer.
Hidden Treasure	Michigan Bluffs	Siskiyou.	Spring Valley	Cherokee Flat	Butto.
Hiron	McAdams Creek	Do.	Squires	Gibsonville	Sierra.
Holmes & Green	Scott Bar	Trinity.	Steen Hollow	Dutch Flat	Placer.
Holmes & McMahon	Weaver	Placer.	Sturtevant	Yuba	Trinity.
Hooper Hill	Scott Bar	Trinity.	Sucker Flat	Trinity.	Do.
Hubbard & Edwards	Hayfork	Siskiyou.	Sunken Flat	Placer.	Do.
Hungarian Hill	Quincy	Trinity.	Sunnyside	Seminole	Sierra.
Hupp & McMurray	Weaver	Trinity.	Swamp Angel	Lowell Hill	Siskiyou.
Independent	Iowa Hill	Plumas.	Thomas	Well Hill	Nevada.
Indian Cañon	do	Trinity.	Thompson	Sierra	Siskiyou.
Indian Hill	Gold Run	Placer.	Trinity	Trinity Center	Do.
Iron Mountain	Whisky Creek	Siskiyou.	Trinity C. and H. Co.	Truckee	Sierra.
Jacob	Red Hill	Trinity.	Trucked	Tull & Co.	Siskiyou.
Jacobs & Co	Scott Bar	Siskiyou.	Union Consolidated	Union Flat	Sierra.
Jacobs No. 2	Red Hill	Trinity.	Union Gravel	Union Hill	Sierra.
Johnston	Scott Bar	Siskiyou.	Union Hill	Junction City	Trinity.
John Young	Indian Creek	Trinity.	Do	Big Bar	Do.
Junction Bar	Oro Fino	Do.	Vance Bar		
Kester	Scott Bar	Do.			
Kentuck	Angel's	Calaveras.			
Kinsman & Steele	Brush Creek	Butte.			
Klostman & Co	McLaughlin Bar	Siskiyou.			
	Scott Bar	Do.			

PRECIOUS METALS.

PLACER MINES—Continued.

CALIFORNIA—Continued.

Name of mine.	District.	County.	Name of mine.	District.	County.
Van Emmonds.....	Michigan Bluff.....	Placer.	Whitney & Co.....	Pine Grove.....	Amador.
Vermilion.....	Meridian.....	Butte.	Wide West.....	Lowell Hill.....	Nevada.
Virginia.....	Howland Flat.....	Sierra.	Williams.....	Indian Creek.....	Siskiyou.
Virginia Bar.....	Scott Bar.....	Siskiyou.	Wilt.....	Cotton Creek.....	Trinity.
Volcano.....	Pine Grove.....	Amador.	Wiltshire.....	Cox Bar.....	Do.
Weaver Creek.....	Weaver.....	Trinity.	Wingate.....	Happy Camp.....	Dal Norte.
Weaverville.....	Weaverville.....	Do.	Wright & Fletcher.....	Ora Fino.....	Siskiyou.
Weed's Point.....	Galena Hill.....	Yuba.	Wyandotte.....	Oroville.....	Butte.
Wheeler.....	Ione.....	Amador.			

COLORADO.

Alma.....	Alma.....	Park.	Oro.....	California.....	Lake.
Blue River.....	Bevan.....	Summit.	Parrot City.....	do.....	La Plata.
Cash Creek.....	Hope.....	Chaffee.	Rob Roy.....	Spaulding.....	Summit.
Edward.....	Jackson.....	Clear Creek.	Sister.....	Near Breckenridge.....	Do.
Hahn's Peak.....	Hahn's Peak.....	Routt.	Star.....	California.....	Lake.
L. H. Arthur.....	Grass Valley.....	Clear Creek.			

DAKOTA.

Battle Creek.....	Battle Creek.....	Custer.	Harmon & Rhobach.....	Jennie and Strawberry.....	Pennington.
Black Hills.....	Rockerville.....	Pennington.	Last Chance Bar.....	Cañon.....	Do.
Canton City Bar.....	Canon.....	Do.	McKay & Ross.....	Cape Horn.....	Lawrence.
Castle Creek.....	do.....	Do.	Stockade.....	Confederate.....	Pennington.
Fort Meade.....	Ruby.....	Do.	Swede Bar.....	do.....	Do.

GEORGIA.

Battle Branch.....	Twelfth.....	Lumpkin.	Glade.....	810 G. M.....	Hall.
Chicingo and Georgia.....	do.....	Do.	Griscom.....	Twelfth.....	Lumpkin.
Cleveland and Buggs Branch.....	Thirteenth.....	Do.	Hand & Barlow.....	do.....	Do.
Cossa.....	Tenth.....	Union.	Nacoochee.....	Third.....	White.
Findley.....	Twelfth.....	Lumpkin.	Sixes.....	Fifteenth.....	Cherokee.
Forest Springs.....	Fourth.....	White.			

IDAHO.

Crepisella.....	Moore's Creek.....	Boisé.	R. W. Spencer.....	Boston.....	Boisé.
Hardscrabble.....	Elk Creek.....	Alturas.	Stevenson & Noble.....	Pioneer.....	Do.
Hon. Ben Wilson.....	Pioneer.....	Boisé.	Thorne Creek.....	Moore's Creek.....	Do.
Noble, Lower & Mann.....	Moore's Creek.....	Do.			

MONTANA.

Bannock.....	Bannock.....	Beaver Head.	Oro Fino.....	Independence.....	Deer Lodge.
Butler & Anderson.....	Henderson Gulch.....	Deer Lodge.	Pioneer.....	Nelson.....	Do.
California.....	Thompson Gulch.....	Meagher.	Shoup & Blume.....	McClellan Gulch.....	Do.
Chas. Prevo.....	McClellan Gulch.....	Deer Lodge.	Squaw Gulch.....	Gold Hill.....	Do.
Diamond.....	German.....	Mengher.	Tubbs & Ramsey.....	Thompson Creek.....	Montana.
Morgan Bar.....	Thompson Gulch.....	Do.	White Bar.....	Bannock.....	Beaver Head.
Noyes & Upton.....	Summit Valley.....	Deer Lodge.	Wm. A. Cheesman.....	Last Chance.....	Lewis and Clarke.

NORTH CAROLINA.

Beaver Dam.....	El Dorado.....	Montgomery.	San Christian.....	Near Columbus.....	Montgomery.
Cochrane.....	Near Troy.....	Polk.			

OREGON.

Ah Moon.....	Shasta.....	Baker.	Forty-nine.....	Forty-nine.....	Jackson.
Anderson & McCall.....	Ashland.....	Jackson.	Fuller.....	Big Bend Cow Creek.....	Douglas.
Baisley.....	Pocahontas.....	Baker.	Gin Lin.....	Uniontown.....	Jackson.
Baisley & Daley.....	do.....	Do.	Goff, Triplett & Chapin.....	Grass Creek.....	Josephine.
Black Hawk.....	Near Randolph.....	Coos.	Grand Applegate.....	Applegate.....	Jackson.
Blue Gravel.....	Yank.....	Josephine.	Gross Brothers.....	Wolf Creek.....	Do.
Borne & Lucas.....	Grant.....	Grant.	Hayes & McGruder.....	Sam's Valley.....	Do.
Boswell.....	Willow Creek.....	Baker.	Hillis.....	Marysville.....	Grant.
Campbell & Co.....	Shasta.....	Do.	Jones, Rivers & Co.....	Blue Cañon.....	Baker.
Carson & Co.....	Marysville.....	Grant.	Josephine.....	Rogue River.....	Josephine.
Catching.....	Murphy.....	Josephine.	Klopp & Johnson.....	Granite.....	Grant.
Chaple & Co.....	Cañonville.....	Douglas.	Laswell & Co.....	Rock Creek.....	Do.
Chas. Dwellley.....	Uniontown.....	Jackson.	Lew Cooper & Co.....	Pocahontas.....	Baker.
Colt & Co.....	Green Mountain.....	Douglas.	Littlefield & Duckworth.....	Blue Cañon.....	Do.
Coquille.....	Humboldt Basin.....	Baker.	Marysville.....	do.....	Do.
Coyote Gulch.....	Near Randolph.....	Coos.	Marshall.....	Coyote Creek.....	Jackson.
D. A. Levens.....	Coyote Creek.....	Jackson.	McWilliams & Ash.....	Canionville.....	Douglas.
Davenport.....	Big Bend Cow Creek.....	Douglas.	Merriam & Anderson.....	Big Bend Cow Creek.....	Do.
Deep Creek.....	Forty-nine.....	Jackson.	Neverswear.....	Pocahontas.....	Baker.
Desselles & Co.....	Elk Creek.....	Grant.	Osborne.....	Chicken Creek.....	Do.
Dry Diggings.....	Walde.....	Josephine.	Pioneer Black Sand.....	Chicken Creek.....	Coos.
Dyer & Son.....	Dry Diggings.....	Jackson.	Porter & Co.....	Rye Valley.....	Baker.
Ericson Owens.....	Green Mountain.....	Douglas.	Powers & Co.....	Marysville.....	Do.
Farris Gulch.....	Rock Creek.....	Grant.	Prairie Diggings.....	Rock Creek.....	Grant.
Fort Lam.....	Farris Gulch.....	Jackson.	Rock Creek.....	Rogers & Copeland.....	Do.
	Fort Lam.....	Do.		Mormon Basin.....	Do.

APPENDIX III: DIRECTORY.

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PLACER MINES—Continued.

OREGON—Continued.

Name of mine.	District.	County.	Name of mine.	District.	County.
Salmon	Big Bend Cow Creek	Douglas.	Sterling	Sterling	Jackson.
Salmon Creek	Pocahontas	Baker.	Stevenson	Shasta	Baker.
Saltmarsh & Co.	Sterling	Jackson.	Summit	Sumter	Do.
Smith	Maryaville	Grant.	Thompson	Maryaville	Grant.
Sproul	Cabon City	Do.	Trail Creek	Trail Run	Do.
Squaw Lake	Applegate	Jackson.	Waldo	Waldo	Josephine.
Steam Beer	Grass Creek	Josephine.	Wickfusser & Co.	Ochoco	Wasco.
Steiger's French Gulch	Shasta	Baker.	William Ruble	Coyote Creek	Jackson.

SOUTH CAROLINA.

Brewer	Chesterfield.
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UTAH.

Argonaut	West Mountain	Salt Lake.
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WASHINGTON.

Cañon Creek	Skagit	Whatcom.	Swank Creek	Swank	Yakima.
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DITCHES.

ALABAMA.

Name of line.	District.	County.	Name of line.	District.	County.
Idaho	Clay.	.....	.....	.....	.....

ARIZONA.

Boston	Greenlee Gold Mountain	Apache.	Vulture Pipe Line	Maricopa.
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MONTANA.

Bannock	Bannock	Beaver Head.	Pioneer and Keystone	Nelson	Deer Lodge.
Birch Creek	Thompson Gulch	Mengher.	Rock Creek	Squaw Gulch	Do.
Camas	do	Do.	Smart's Creek	Henderson Gulch	Do.
Diamond	German	Do.	White Bar	Bannock	Beaver Head.
Hall Columbia	Independence	Door Lodge.	William A. Cheeseman	Last Chance	Lewis and Clarke.
John Noyes	Summit Valley	Do.			

IDAHO.

Alderson	Moore's Creek	Bolsé.	Lisson	Ell Creek	Alturas.
Christy	do	Do.	Mountain	Moore's Creek	Boisé.
Crepisonna	do	Do.	Plowman	do	Do.
Cuddy	do	Do.	Spencer	Boston	Do.
Dunn	do	Do.	Stevenson & Noble	Pioneer	Do.
East Moore's Creek	do	Do.	Thorn Creek	Moore's Creek	Do.
Hanson	do	Do.	Upper Alderson	do	Do.
Lambing	do	Do.	Wilson	Pioneer	Do.

GEORGIA.

Anicalola and Etowah	Fourth	Dawson.	Hand	Twelfth	Lumpkin.
Coosa Creek	Tenth	Union.	Nacoochee	Third	White.
Dahlonega	Twelfth	Lumpkin.	Singleton	Twelfth	Lumpkin.
Glade	do	Hall.	Town Creek	Fourth	White.

DAKOTA.

Battle Creek	Battle Creek	Custer.	Last Chance	Canon	Pennington.
Black Hills G. & W. Co	Whitewood	Lawrence.	McKay & Ross	Capo Horn	Lawrence.
Black Hills Placer Co.	Rockville	Pennington.	Stockade	Confedorate	Do.

COLORADO.

Alma	Alma	Park.	Sisler	California	Summit.
Boston	Star	Summit/ Routt.	Star	do	Lake.
Elk River	Hahn's Peak	Summit.	Stevens & Leiter	do	Do.
Gold Run			Union-French		Summit.

PRECIOUS METALS.

DITCHES—Continued.

OREGON.

Name of line.	District.	County.	Name of line.	District.	County.
Anderson & McCall	Ashland	Jackson.	Jones & Carpenter	Pocahontas	Baker.
Ashland	Forty-nine	Do.	Josephine	Josephine.	Josephine.
Baisley	Pocahontas	Baker.	Klopp & Johnson	Granite	Grant.
Blue Gravel	Gant	Josephine.	Lake	Rock Creek	Do.
Borne & Lucas	Granite	Grant.	Lew Cooper & Co	Pocahontas	Baker.
Carson & Johnson	Murphy	Josephine.	Littlefield & Duckworth	Blue Cañon	Do.
Catchings	Cantonville	Douglas.	Marshall	Coyote Creek	Jackson.
Chapel & Co	Uniontown	Jackson.	Marysville	Blue Cañon	Baker.
Charles Dwelley	Green Mountain	Douglas.	McWilliams & Ash	Cantonville	Douglas.
Colt & Co	Humboldt	Baker.	Merriam & Anderson	Big Bend Cow Creek	Do.
D. A. Levens	Big Bend Cow Creek	Douglas.	Miner's	Marysville	Grant.
D. F. Salmon	do	Do.	Nelson	Pocahontas	Baker.
Deep Creek	Elk Creek	Grant.	Pioneer	Clarksville	Coos.
Dessalles & Co	Waldo	Josephine.	Placer Gold	Rye Valley	Baker.
Dyer & Son	Green Mountain	Douglas.	Powers & Co	Marysville	Do.
El Dorado	Shaata	Baker.	Prairie Diggings	Rock Creek	Grant.
Farris Gulch	Farris Gulch	Jackson.	Rook Creek	Saltmarsh & Co	Do.
Forty-nine	Forty-nine	Do.	Squaw Lake	Squaw Lake	Jackson.
Gin Lin	Uniontown	Do.	Steam Beer	Applegate	Do.
Goff Triplett & Chapin	Grass Creek	Josephine.	Sterling	Grass Creek	Josephine.
Grand Applegate	Applegate	Jackson.	Thompson	Marysville	Jackson.
Gross Brothers	Wolf Creek	Do.	W. Basswell	Willow Creek	Grant.
Hayes & McGruder	Sam's Valley	Do.	W. Rush	Coyote Creek	Baker.
Hillis	Marysville	Grant.	Waldo	Waldo	Jackson.
Humboldt	Canton City	Do.	Wickaiser & Co	Ochoco	Josephine.
J. B. Gardner	Granite	Do.	Wolfinger	Canton City	Wasco.
J. G. Fuller	Big Bend Cow Creek	Douglas.	Young & Rimbol	Sumter	Grant.
J. N. Osborn	Chicken Creek	Baker.			Baker.

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